Construction News

★Denotes work advertised in ENGINEERING NEWS.
✚Denotes contract awarded. The names of bidders awarded contracts are set in CAPITALS.

Railways Allowed Substantial Rate Increase

The Interstate Commerce Commission handed down the Rate Decision on Friday which allowed one hundred railway companies in the East to increase their rates on certain classes of freight. The advance, which will amount to 5% in some cases, will average 3½ to 4%, and mean an increase in the revenue of $30,000,000 to $35,000,000 per year. Decision was affirmed by a vote of 5 to 2, Commissioners Harlan and Clements dissenting.

This decision was the result of reopening the case after the war started. That the war had an influence on the decision is seen from the following extract of the opinion:

"Whatever the consequences of the war may prove to be we must recognize the fact exists; the fact that it is a calamity without precedent and the fact that by it the commerce of the world has been disarranged and thrown into confusion. Collectively they (war conditions) present a new situation."

By many it is argued that the increase in rates is not the important part of the decision, but the change in temper of the commissioners who are aiding the railways by their counsels. That the entire country has changed its opinion of the railway situation is evident from the decision and the referendum vote in Missouri repealing the "Full Crew Law."

Physical Valuation of Railways Criticized—When the valuation work was started Congress appropriated about a million and a half dollars for expenses. Beginning on an entirely new subject, it was to be expected that many mistakes would be made, but it was not contemplated that practically the whole of the first year's work would go to waste, says the "Journal of Commerce." While officials of the Commission would attempt to refute the statement that nothing tangible had been accomplished with the million and a half appropriated by Congress, here are many railroad experts who assert that the work done has proven of very little, if any, use. It is now learned that the Commission is contemplating asking Congress for an appropriation of three million dollars for the physical valuation work during the coming year. The Government, it is said, is not at present in any position to make large appropriations. The European war has reduced the customs revenues and the war revenue tax was placed upon the statute books for but one year.

A number of railroad experts question whether any direct good is to be accomplished by making a physicial valuation of the railroads of the United States. Theoretically it would be a good step inasmuch as the Interstate Commerce Commission might then have some comprehensive basis for making rates, and then it would be easy to establish the desirability of new security issues. But already the physical valuation work has raised a new crop of critics. The theory upon which the Commission is basing this work has been adversely discussed in many quarters. It was the subject of a special report and discussion by the National Association of Railway Commissioners, who convened here last month. The question was raised after obtaining the first cost value of railroad property. How is the Government to establish the present value of this property following many years of usage?

The Physical Valuation Board has provided for a "condition per cent." account, but even this has been criticized as an arbitrary matter and wholly impracticable. In the first place, it was asked, What is the meaning of "condition per cent. " If the condition per cent. is fixed at 75 per cent., would it mean that one-quarter of the life of the ties had expired, or that three-quarters of them were as good as it was practicable to maintain them, or that one-quarter of them should be immediately replaced, or that the present value was 75 per cent. of the present cost of laying them, or that the average tie was about three-quarters as good as new This same question might arise as to any class of property of the railroads.

The schedules of valuation advanced by the Commission might all be discussed just as adversely as the 'condition per cent." mentioned herewith. Probably the most important of these items is that of abandoned property. The railroads might reasonably ask the Commission what is to be done with abandoned property. Even granting that it will be comparatively easy to estimate the value of abandoned property, the question still arises, What effect such property is to have on the rate basis? When the property is abandoned for the best interests of the road it appears to be reasonable to suppose that a road should not be compelled to lose on that account. If the reasonableness of rates is to be measured by the physical value of the property used in transportation, the abandoned property still on the hands of the roads should be estimated into this valuation. Furthermore, it was suggested to the Commission that 'abandoned property" should be divided into two classes, namely, that property which has been abandoned and sold by the railroads and that property which is no longer used in the business of transportation, but which is still in the possession of the roads.

Higher Ocean Freight Rates

Rates for shipment on the seas have risen in a perpendicular way since the middle of October, and are now higher than before in years. As an example, foreign vessels have recently been chartered to take cotton to Scandinavian ports at a rate of $1 to $1.30 per 100 lb. The rate for grain from the Atlantic seaboard to Liverpool, which was 2¼d. last year, has risen to 7d. Flour, which was 14 cents then has advanced to 26 cents. The National City Bank has received a cable from its Buenos Aires branch, saying that ship owners can obtain very lucrative rates for sailing at that port from January to July, both for steam and sail tonnage. Those familiar with maritime matters predict that a rate of 10s. will be paid for grain shipment before the highest figures are reached. The causes are well known. For example, there are approximately 42,000,000 gross tons of shipping available by the maritime nations. This includes some coastwise trade and also more than 2,000,000 tons on the Great Lakes of the United States. There has been taken from this, since the war started, 3,500,000 gross tons of German and Austrian vessels, which has been inturned at neutral ports, in home waters, or captured. A quarter of a million tons have been lost by British ship owners to the Germans, and perhaps 350,000 tons, vessels of all nations, have been lost by mines. In addition, the British Government has commandeered 500 vessels, with a gross tonnage of 1,700,000, to transport troops from various parts of the world. This makes a total of nearly 6,000,000 tons, or approximately 15% of the world's tonnage available in ordinary times, but at present of no use as far as cargo-carrying trade is concerned. In addition to this, the element of time in making a voyage has a great deal to do with the matter. Vessels are held up for days and even works, in part owing to naval operations.

Navigation is impeded by the restricted use of the wireless, the lack of proper beacons; but more than all of this, there is the fact that a great deal more traffic has to be moved, particularly to Great Britain; where formerly ships were heavily laden on outbound voyages from London and British ports, now they go light, coming back with full cargoes. Considerable difficulty has also been experienced in securing coal at home ports and ordinary coaling stations. Then, too, the price of coal in the Southern Hemisphere and Mediterranean and Asiatic ports is very much higher than at any previous time.

The Steinway Tunnel, a tube extending from Long Island City under the East River to the Borough of Manhattan, New York, will be open for travel April 1, according to a recent statement by Theodore P. Shonts, Pres. of the Interborough, who said a temporary service will be started at that time. Trains from Jackson Ave., Long Island City, will run to a temporary station at 41st St. and Lexington Ave., Manhattan. The tunnel has been practically completed for several years, but never opened because of litigation.

The Bucyrus Co., South Milwaukee, Wis., has just received an order for a levee building machine from the United States Army Engineer's office for the Fourth District. This office is located at New Orleans. The machine cost approximately $44,000. It is reported that another machine of a similar design will be ordered for levee work in the spring.

RAILWAYS

North Carolina—Norfolk Southern R.R.—This company contemplates extending its line from Newbern to Cape Lookout N. C.

Georgia—Ocilla Southern R.R.—This company will probably make definite plans next year for extension through Perry to Macon. A. J. Henderson, Ocilla, Ga., is Pres.

+Alabama—Atlanta, Birmingham & Atlantic R.R.—This company has awarded a contract to THOMAS WORTHINGTON, Birmingham, Ala., for the construction of a railway from Roebuck to Coalmont, Ala.

Louisiana—Monroe & Texas R.R.—This company recently filed its charter and proposes to construct a line from Monroe through parishes of Ouachita, Jackson, Winn, Natchitoches and Sabine into Texas. The capital stock is $250,000, and the company is controlled by owners of Louis Werner Sawmill Co.

Illinois—Illinois Central R.R.—This company will make the following improvements: Grade reduction and second track work between Princeton, Ky., and Dulaney on 11.1 miles; relocation of 5.25 miles at Iron Hill, and grade reduction at Grand Rivers on 0.6 mile. Contracts have been awarded to the following: H. C. HODGES, Birmingham, Ala.; WINSTON BROS. CO., Minneapolis, Minn.; WALSH CONSTRUCTION CO., Davenport, Iowa.

Chicago & Illinois R.R.—Plans are being considered by this company to connect with the Wabash R.R. in Chicago. J. F. Gilchrist, 332 South Michigan Ave., Chicago, Ill., is Pres.

North Dakota—Midland Continental—Surveys are being made by this company for an extension from Wimbledon, N. D., to Grand Forks, 94.5 miles.

Arkansas—Memphis, Dallas & Gulf R.R.—This company will connect with the Rock Island R.R. about three miles north of Hot Springs. The estimated cost is $15,000.

Colorado—Denver & Interurban R.R.—This company has made requests for a franchise to electrify the Colorado & Southern right-of-way into Boulder.

Idaho—Oregon Short Line R.R.—The business men of Caldwell, Idaho, are preparing to finance the electrification of this company's branch from Caldwell to Wilder, about 11 miles. Carl Stradley, Salt Lake City, Utah, is Ch. Engr. Noted Dec. 3.

California—San Pedro, Los Angeles & Salt Lake R.R.—Press reports state that this company has applied to government for right-of-way through Angeles Forest Reserve for its proposed line from Doggett to San Bernardino. Surveys have been made. The line would be about 110 miles long and would cost about $4,000,000.

ELECTRIC RAILWAYS

Worcester, Mass.—The Worcester Consolidated St. Ry. Co. is considering plans for the extension of its branch line to Sandersdale. H. C. Page, Worcester, is Gen. Mgr. Noted Dec. 10.

Providence, R. I.—The Rhode Island Co. has been petitioned to extend its North Main St. line to the state line in Woonsocket. A. E. Potter, Providence, is Pres. and Gen. Mgr.

Middletown, Conn.—The Middletown & Chester Ry. Co. is considering plans for the extension of its electric railway through Chester, Shailerville, Haddam, Durham, Higganum and Middletown. Richard H. Bunce is interested.

Torrington, Conn.—The Torrington Traction Co. is being organized to construct an electric interurban railway from Torrington to Thomaston. George B. Goodwin and Howard Guernsey are interested.

Batavia, N. Y.—The Batavia Traction Co. is preparing plans for a three-mile line from Batavia to Horseshoe Lake. The line will connect with the Batavia St. Ry. at its eastern terminus.

Depew, N. Y.—The Buffalo & Depew Ry. Co. is considering plans for the extension of its line east from Depew to Crittenden, about six miles. U. L. Upson, Depew, is Supt.

Daytona, Fla.—Plans are being prepared by the Central of Florida Ry. Co. for the construction of about five miles of new track. Michael Sholtz, Daytona, is Pres. and Gen. Mgr.

New Orleans, La.—The Orleans-Kenner Electric Ry. Co., will build the Metairie loop in New Orleans.

Somerset, Ky.—The Kentucky Utilities Co. recently sold bonds for $3,000,000, the proceeds of which will be used for the extension of its electric railway from Somerset to Burnside. F J Spragle, Somerset, is Mgr.

Cleveland, Ohio—The Cleveland Ry. Co. plans to extend its line on Euclid Ave. from East 33d to East 40th St., and the Buckeye line from East 116th to East 130th St. George L. Radcliffe, Cleveland, is Gen. Mgr.

The Washington Boulevard St. Ry. Co. has been incorporated to construct an electric railway in Cleveland Heights. The incorporators are J. C. Lowe, F. C. Work, V. E. Davis, R. F. Allen, and H. W. Downing.

The Cleveland, Canton & Akron Ry. Co. has been incorporated to construct a four-track subway in 55th St. from the lake front to Kingsbury Run in Cleveland. The incorporators are W. W. White, Thomas H. Garry, James McSweeney, W. M. Connelly and W. B. Snavely.

Adrian, Mich.—According to press reports arrangements are being made for the construction of an electric railway from Adrian to Elkhart.

Detroit, Mich.—The Detroit United Ry. Co. has been asked to consider plans for the extension of its tracks on the western city limits at Webb Ave. to Palmer Park in Detroit. F. W. Brooks, Detroit, is Gen. Mgr.

Menominee, Mich.—The Menominee & Marinette Light & Traction Co. contemplates building about 1½ miles of new track in Menominee during 1915. Edward Danniell, Menominee, is Secy. and Gen. Mgr.

Muskegon, Mich.—The Trans-Michigan Ry. Co., has secured franchises, right-of-way and terminal properties for its proposed line between Muskegon and Saginaw.

Alton, Ill.—The Alton & Eastern Electric Ry. Co., is making arrangements for the extension of the Alton St. line from Alton to the new hospital east of Alton. T. W. Gregory, East St. Louis is Secy.

Amboy, Ill.—The Lee County Central Electric Ry. Co. plans to build a 12-mile line from Middleburg to Rochelle during 1915.

Cascade, Mo.—The Ozark Valley Ry. Co. has been incorporated to construct an electric railway from Cascade to Williamsville. The incorporators are O. D. Ridgely, J. T. Long, Kansas City, James K. Cochran, Pana, Ill., James H. Downes, Asuumption, Ill., and G. A. Long, Kenner, Mo.

Argenta, Ark.—The City Council has granted a franchise to the Argenta Ry. to extend its line on Washington Ave. E. W. Jackson, Little Rock, is Vice-Pres. and Ch. Engr.

Calico Rock, Ark.—S. J. Johnson, Calico Rock, and associates are interested in the construction of an electric railway from Calico Rock to Hoxie.

Glendale, Calif.—The Glendale & Montrose Ry. Co. is preparing to award contracts for the construction of an electric railway from Glendale to Eagle Rock.

Los Angeles, Calif.—The City Council will offer for sale a 21-year franchise to construct an electric railway on portions of Brooklyn, Wabash and Evergreen Ave.

Pasadena, Calif.—The Council has granted a franchise to the Pacific Electric Ry. Co. to double-track its line on North Lake Ave. from Colorado to Washington St. J. McMillan, Los Angeles, is Gen. Mgr.

San Francisco, Calif.—Plans are being prepared by M. M. O'Shaughnessy, City Engr., for the construction of the proposed municipal electric railway through Golden Gate Park to the Sunset District.

LIGHT, HEAT AND POWER

Buffalo, N. Y.—The lowest bids received by the Department of Public Works for the equipment of the power and lighting plant for the new Porter Ave. pumping station were those of McIntosh & Seymour, Auburn, N. Y., at $25,450 and $22,900, and McCarthy Bros. & Ford, Buffalo, $26,429 and $23,741. Francis G. Ward is Comr. of Pub. Wks.

Poland, N. Y.—It is reported that the villages of Poland and Cold Brook are considering the construction of a joint electric-light plant to furnish light and power to both villages.

Newark, N. J.—The Public Service Electric Co. and Public Service Gas Co. have isued $2,000,000 and $750,000, respectively, of capital stock, in acordance with permission granted by the Board of Public Utility Commissioners, for extensions and improvements in plants and systems.

The Maas & Waldstein Co., manufacturing chemists, plans to build a hollow-tile and reinforced concrete power plant, to cost about $18,000, at its factory on Passaic Ave.

West Monroe, La.—See item under "Water Supply—Irrigation."

Uniontown, Ky.—The Uniontown Light & Power Co. is reported to be considering plans for improvements and extensions to the local plant. P. A. McIntire is Secy. and Treas.

Cleveland, Ohio—Bids will be received until noon, Dec. 31, by the Commissioner of Purchases and Supplies, 513 City Hall, for rubber covered lead encased cable for the municipal electric-lighting system. F. W. Ballard, 1443 East Third St., is Comr. of Light and Heat Dept.

New Philadelphia, Ohio—Press reports state that the County Electric Co. plans a number of improvements to its plant at New Philadelphia. C. H. Howell, Coshocton, Ohio, is Vice-Pres. and Mgr. of the company.

+Norwood, Ohio—The Board of Control has awarded contracts in connection with the rebuilding of the municipal electric-light plant to: The NAUGLE POLE & TILE CO., Chicago, for poles; the WESTERN ELECTRIC CO., wiring, insulation and cross irons; the BEATTIE ELECTRIC CO., new leads for old generators. Noted July 30.

Youngstown, Ohio—The Public Utilities Commission has authorized the Mahoning Light & Power Co., recently organized, to issue $530,000 in bonds, the proceeds of which will be used to build a plant. The company was granted permission to purchase the plant of the Youngstown Heating Co. for $125,000.

+Indianapolis, Ind.—The Board of Park Commissioners has awarded the contract for lighting the parks, bridges and boulevards for a period of ten years to the MERCHANTS' HEAT & LIGHT CO. The price, based on the initial installment, is $24,206 a year. At the expiration of the contract all equipment becomes the property of the city. Thomas A. Riley is City Clk.

Grantsburg, Wis.—A special election will soon be held to submit to the voters the question of granting a franchise to the Grantsburg Light & Power Co. for installing and operating an electric-light and power plant in Grantsburg.

Stillwater, Minn.—The City Council is considering the establishment of a municipal electric-light plant in Stillwater. The present contract with the Consumers' Power Co. for street lighting expires next April. C. A. Lammers is City Clk.

Larned, Kan.—Bids will be received until Jan. 18 for the installation of a municipal electric-light plant in Larned. The equipment will include two motor-driven turbine pumps, one 125-kw. and one 150-kw. generating unit, direct-connected, and distributing system complete. Worley & Black, Reliance Bldg., Kansas City, Mo., are Engrs.

Hayti, S. D.—It is reported that a company formed of local business men has been granted a franchise by the Town Board to construct and operate an electric-light plant in Hayti.

Flaxville, Mont.—According to press reports the Flaxville Commercial Club is promoting a plan for the establishment of an electric-light plant in the town.

Pine Bluff, Ark.—The City of Pine Bluff is considering the purchase of the electric-light plant and water works system. Improvements and extensions will be made if the transaction is completed. W. A. Lee is City Clk.

Marble Falls, Tex.—It is reported that the Colorado River Power Co., Marble Falls, plans to build transmission lines from its hydro-electric plant, now in course of construction, to Houston and neighboring cities and towns. Noted July 9.

Redrock, Okla.—See item under "Water Supply-Irrigation."

Red Cliff, Colo.—It is reported that John Fleming, Red Cliff, is considering the establishment of an electric-light plant to serve the town, and will shortly apply for a franchise.

White Oaks, N. M.—The Wild Cat Mining Co. is building a new electric power plant to supplement the present one. A total of 1100 hp. will be available. The company will extend its transmission lines to the properties of the Parsons Mining Co. and the American Mining Co. Noted Sept. 10, under Carrizozo, N. M.

Montesano, Wash.—The Northwest Electric & Water Works Co. has had plans prepared for an electric-power plant to be ready for operation by spring. The plans call for a steam-power plant to be located on the water front.

✚Seattle, Wash.—The Board of Public Works has awarded contracts for furnishing distributing transformers for the municipal electric-light plant to the FORT WAYNE ELECTRIC CO., Colman Bldg., Seattle, at $27,972 and the PITTSBURG TRANSFORMER CO., Pittsburgh, Penn., at $5000. Noted Dec. 3.

✚Gold Hill, Ore.—The City Council has awarded the contract for lighting the city for a period of ten years to the CALIFORNIA-OREGON POWER CO. The system will consist of 183 cluster lights, 35 single lights on wooden standards and 16 lights on iron standards. Bids for its installation will be received until Jan. 4. B. G. Harding is City Recdr. Noted Dec. 17.

Pasadena, Calif.—It is reported that the City Trustees contemplate the installation of new equipment, costing about $46,000 in the municipal electric-light plant. C. W. Koiner is Gen. Mgr. and Ch. Engr. of the plant.

✚Stockton, Calif.—The City of Stockton has awarded the contract for lighting the streets and boulevards of the city for a period of five years, beginning Dec. 15, to the WESTERN STATES GAS & ELECTRIC CO., of California. Some additions will be made to the system.

BRIDGES

Woonsocket, R. I.—The City Council has passed a resolution appropriating $75,600 to be used for straightening the lower end of Hamlet Ave. between Davison St. and Cumberland St., and replacing the two wooden bridges between those points with one reinforced concrete bridge over the Hamlet Trench and the Blackstone River. F. H. Mills is City Clk.

Oswego, N. Y.—At a special election held, Dec. 11, the taxpayers of the towns of Oswego and Volney voted in favor of building a reinforced concrete bridge over the Oswego River at Minetto, Oswego County. The bridge will be located at Benson Ave., about 1800 ft. south of the present structure at Mineto. The estimated cost is $91,414.

Paterson, N. J.—The Board of Chosen Freeholders of Passaic County has instructed Garwood Ferguson, County Engr., to prepare plans for a bridge across the Passaic River from the Pennington Park property to Westside Park. Alternative plans for a concrete arch bridge and a two-span steel bridge will be submitted to the Park Board for approval. It is said that either bridge will cost aproximately $45,000.

✚Perth Amboy, N. J.—The Board of Chosen Freeholders of Middlesex County, New Brunswick, has awarded the contract for pile and timber rest piers under the draw span of the Amboy Bridge over the Raritan River, to the GENERAL CONTRACTING & ENGINEERING CO., 29 Broadway, New York, N. Y., at $4942. Other bidders were: Rhodes & Manvel, Elizabeth, N. J., $6500, and H. H. Holmes, Jersey City, $11,900. Noted Dec. 3.

Trenton, N. J.—The Pennsylvania R.R. has submitted a plan to the Board of City Commissioners to eliminate navigation on the waterway of the Delaware & Raritan Canal, and construct permanent bridges at the following street crossings: Hermitage Ave., Prospect, Willow, North Warren, West Hanover, North Broad and North Montgomery Sts.; estimated cost, $125,000.

✚Nanticoke, Penn.—(Official)—The Dravo Contracting Co., Pittsburgh, general contractors for the construction of the bridge over the Susquehanna River between Nanticoke and West Nanticoke, has awarded a sub-contract for the concrete piles required for the structure to the RAYMOND CONCRETE PILE & FOUNDATION CO., 11 Pine St., New York, N. Y. D. A. Keefe, Athens, Penn., is Consult. Engr. Noted June 25 and July 23.

Norristown, Penn.—Press reports state that the Commissioners of Montgomery County are considering the construction of two new bridges in Frederick Township, one over Sciota Creek, on the road leading from Swamp Rd. to Little Rd., estimated cost, $2500, and the other over Goshenhoppen Creek on the road from Zieglerville to Spring Mount, estimated cost, $2000.

Allen, Md.—(Official)—Bids will be received until noon, Dec. 29, by the State Roads Commission, 601 Garrett Bldg., Baltimore, for the construction of a reinforced concrete bridge over the creek, between Wicomico and Somerset Counties, near Allen, Md. Contract No. 094-A. O. E. Weller is Chn., and William L. Marcy is Secy. of the State Roads Comn.

Baltimore, Md.—Bids will be received until Dec. 29, by the State Roads Commission, Garrett Bldg., for the construction of a draw rest pier for the Dover Bridge, Talbot and Caroline Counties.

Covington, Va.—(Official)—Bids will be received until noon, Jan. 4, by the Clerk of the Circuit Court of Alleghany County for the construction of a 100-ft. bridge over Dunlaps Creek, 5½ miles from Alleghany; superstructure to be either of steel or reinforced concrete with concrete substructure.

Gate City, Va.—(Official)—Bids will be received until 1 p.m., Jan. 5, by the Clerk of the Circuit Court of Scott County for the construction of a bridge over Big Moccasin Creek about 6½ miles from Gate City. It will be 87½ ft. long with a 12-ft. roadway.

Lynchburg, Va.—(Official)—Plans for the 1700-ft. viaduct over the James River, to be built jointly by the city, Amherst County, the Chesapeake & Ohio, the Norfolk & Western and the Southern Ry., are still in the preliminary stages. A special act of the Legislature authorizing its construction will be necessary, and nothing further will be done until this is passed. Noted July 16 and 30, Nov. 19.

Radford, Va.—The City Council is considering a bond issue of $12,500 to be used for the construction of a bridge over the New River.

Richmond, Va.—(Official)—Bids will be received until noon, Jan. 4, by the Clerk of the Circuit Court of Henrico County for a reinforced concrete bridge over the Chickahominy River between Hanover and Henrico Counties, about two miles from Glen Allen. The structure will have three spans of 31½ ft. each, with a 12-ft. roadway. The Childrey Co., Richmond, is Engr.-in-Charge.

Shelby, N. C.—(Official)—We are advised by S. S. Royster, Pres. of the Shelby Northern Ry. Co., that bids will probably be asked within the next 60 days for the construction of two bridges on the proposed railway from Shelby to Casar, N. C. Noted Dec. 17.

✚Folkston, Ga.—(Official)—The Commissioners of Charlton County have awarded the contract for constructing a bridge over St. Mary's River between Charlton County, and Nassau County, Florida, to E. F. DEAN, Sr., Folkston. Noted Dec. 3.

Bradentown, Fla.—(Official)—All bids received, Dec. 11, by the Board of Public Works for the construction of a Scherzer rolling lift bridge were rejected. W. H. Tracy is Comr. of Pub. Wks. Noted Dec. 10.

Fort Lauderdale, Fla.—Bids will be received until Jan. 4, by Z. T. Merritt, Clk. of the Bd. of Comrs. of Dade County, for the construction of steel drawbridge with approaches and abutments over the New River at Fort Lauderdale. Noted July 23, Aug. 20, Oct. 22 and Nov. 19.

✚Vicksburg, Miss.—(Official)—The Boards of Supervisors of Warren and Hinds Counties have awarded the contract for the construction of a 520-ft. bridge over the Big Black River at Holt's Ferry near the Alabama & Vicksburg, Ry., to the VINCENNES BRIDGE CO., Vincennes, Ind., at $9708. Other bidders were: Virginia Bridge & Iron Co., $11,450; W. T. Young, $9772; A. M. Blodgett Construction Co., $11,186; Central States Bridge Co., $11,990; Midland Bridge Co., $14,456; Owens Construction Co., $17,778. Noted Oct. 29, Nov. 19 and 26.

Covington, Ind.—(Official)—Bids will be received until 1:30 p.m., Jan. 7, by the Board of Commissioners of Fountain County for the construction of a bridge over the Wabash River at Covington. It will consist of a steel superstructure with concrete abutments and piers. The estimated cost is $40,000. J. G. B. Short is County Engr. W. B. Gray is Audr. Noted Dec. 3.

✚Greensburg, Ind.—(Official)—The Board of Commissioners of Decatur County has awarded contracts for bridge construction in the county to the BURK CONSTRUCTION CO., Newcastle, Ind., at $7180; CENTRAL STATES BRIDGE CO., Indianapolis, $945, and BARRINGER & CO., Greensburg, $3229. Noted Dec. 10.

✚South Bend, Ind.—(Official)—The Grand Trunk Western Ry. has awarded the contract for the construction of a new railway bridge at South St. Peter St. to CHARLES GORDON. Noted Dec. 17.

✚Keokuk, Iowa—Press reports state that the contract for rebuilding the Keokuk-Hamilton Bridge over the Mississippi River has been awarded to the STROBEL STEEL CONSTRUCTION CO., Chicago, Ill. The work will cost approximately $400,000. Ralph Modjeski, Chicago, is Consult. Engr. Noted Aug. 6, Sept. 3 and Nov. 19.

Garfield, Kan.—The Commissioners of Pawnee County, Larned, have passed a resolution appropriating $13,000 for the construction of a bridge over the Arkansas River at Garfield. The structure will be of reinforced concrete. Noted Oct. 22.

Yates Center, Kan.—(Official)—Bids will be received until noon, Jan. 4, by the County Clerk, of Woodson County for the construction of two steel I-beam bridges with concrete substructures and reinforced concrete floors; the Pierson Bridge, Eminence Township, and the Plum Creek Bridge, Owl Creek Township.

Geneva, Neb.—Bids will be received until noon, Jan. 12, by the Board of Commissioners of Fillmore County for bridge construction during 1915. Bert A. Lynn is County Clk.

Omaha, Neb.—Bids will be received until noon, Jan. 2, by the Board of Commissioners of Douglas County for all county bridge construction during 1915. Frank Dewey is County Clk.

✚Aberdeen, S. D.—The Board of Commissioners of Brown County has awarded the contract for the construction of nine bridges in the county to the IOWA BRIDGE CO., Des Moines, Iowa, at $13,998.

Bastrop, Tex.—The Smithville Precinct of the Commissioners Court of Bastrop County has sold bonds for $50,000, the proceeds of which will be used to rebuild a bridge over the Colorado River destroyed by the flood of last December. Noted Jan. 15.

San Antonio, Tex.—The City Council is considering the construction of a reinforced-concrete bridge over the San Antonio River at Garden St. Hans Helland is City Engr.

✚**El Reno, Okla.**—(Official)—The Board of Commissioners of Canadian County, on Dec. 10, awarded the contract for the construction of 16 steel bridges in the county to the OREGONIA BRIDGE CO., Lebanon, Ohio.

Bellingham, Wash.—(Official)—The construction of new bridges at Grant, Sylvan, Prospect, James and Elk St., which was contemplated by the City Council, has been postponed until some time in 1915. The estimated cost of the structures is $100,000 if built of concrete, or $30,000 for wooden bridges. Charles Lindbery is City Engr. Noted Dec. 10.

Hoquiam, Wash.—It is reported that the Northern Pacific Ry. will soon award the contract for the steel superstructure of a new bridge near Hoquiam. W. C. Albee, Tacoma, is Div. Supt. of the Northern Pacific Ry.

Spokane, Wash.—The Engineering Department of the Northern Pacific Ry. has filed plans with the City Engineer for nine concrete bridges to carry the railway tracks over Washington, Stevens, Howard, Wall, Post, Monroe, Madison, Jefferson and Adams St. This work belongs to the grade separation project of the Northern Pacific Ry. Morton Macartney is City Engr.

Roseburg, Ore.—The lowest bid received by the Douglas County Court for the construction of a bridge across Myrtle Creek in connection with the improvement of the Cañon Creek road was that of the Portland Bridge Co., Portland, Ore., at $5998.

Famoso, Calif.—The Board of Supervisors of Kern County, Bakersfield, has had plans prepared for a 90-ft. reinforced concrete bridge to be built across Poso Creek at Famoso. P. E. Jastro, Bakersfield, is Chn. of the Bd.

San Francisco, Calif.—(Official)—Plans have not been prepared yet for rebuilding the Fourth St. Bridge, but the Board of Public Works has the sum of $50,000 available for this work. M. M. O'Shaughnessy is City Engr. Noted Dec. 3.

✚**London, Ont.**—(Official)—The Commissioners of Middlesex and Elgin Counties have awarded the contract for the construction of the Tait Bridge over the River Thames between the two counties to DAVID WITHERSPOON, Ailsa Craig, Ont., at $20,900. Noted Nov. 26.

✚**Toronto, Ont.**—The City Council has awarded the contract for the construction of the Don Section of the Bloor St. Viaduct to QUINLAN & ROBERTSON, Montreal, Que., at approximately $947,000. Noted Dec. 17.

✚**St. Catharines, Ont.**—The City Council has awarded the contract for the construction of the St. Paul High Level Bridge over the old Welland Canal to the CANADIAN BRIDGE CO., Walkerville, Ont., at $91,000. The Engineer's estimate was $110,000. Bids were opened Dec. 8. Noted Nov. 26.

WATER SUPPLY—IRRIGATION

✚**Thompsonville, Conn.**—The contract for constructing an elevated tank has been awarded by the Thompsonville Water Co. to FITCHBURG-DES MOINES CO., at $15,801. Noted Jan. 1.

Buffalo, N. Y.—See item under Light, Heat and Power.

Hudson, N. Y.—The city plans to build another filtration plant with a capacity of 2,00,000 gal. per day. M. J. O'Hara is Supt.

Mount Morris, N. Y.—At a recent election the citizens voted in favor of issuing $65,000 in bonds, the proceeds of which will be used for the construction of a water system.

Rochester, N. Y.—The city plans to complete its third conduit in 1915. It will be a 36-in. c.-i. pipe. Beekman C. Little is Supt. of Water Bureau.

Watervliet, N. Y.—The Board of Water Commissioners filed with the State Conservation Commission on Dec. 9 the amended application of the city for the construction of a water system. Frank Keis is City Engr. Noted Nov. 5.

Atlantic City, N. J.—(Official)—Bids will be received until Dec. 31 by the Board of Commissioners for making improvements at the Absecon Pumping Station. Harry Bacharach is Dir. of Parks and Pub. Property.

✚**East Orange, N. J.**—The contract for 250 tons of c.-i. water has been awarded by the Water Commission to STANDARD CAST IRON & FOUNDRY CO., at about $19.75 per ton. Noted Sept. 17.

Lambertville, N. J.—The City Council is considering the erection of a concrete dam in Swan Creek to provide a water supply for fire purposes.

✚**Allendale, S. C.**—The contract for constructing a water system has been awarded to R. L. ADERHOLD, College Park, Ga. Noted Oct. 22.

Charleston, S. C.—At a recent meeting the Council voted in favor of accepting the recommendation of the Committee on Water Supply to purchase the plant of the Charleston Light & Water Co. for $1,500,000. The Council has also authorized the expenditure of $100,000 for the improvement of the system. Noted Dec. 10.

Philadelphia, Miss.—The citizens contemplate issuing bonds for $30,000, the proceeds of which will be used for the installation of a water system.

Plaquemine, La.—The time for receiving bids for the sale of $42,000 in bonds, the proceeds of which will be used for the construction of a water system, has been extended from Dec. 1 to Jan. 5. Noted Nov. 26.

Welsh, La.—Press reports state that M. B. Vanness, Welsh, has been granted a 25-year franchise for the construction and operation of a water system.

✚**West Monroe, La.**—The contract for enlarging the water system and electric-light plant has been awarded to C. A. REES, Shreveport, La., at $16,000. Noted Oct. 29.

Covington, Ky.—John W. Hill, Cincinnati, Ohio, has submitted plans to the Water Commission for the construction of a water main across the Licking River. He recommends laying two 20-in. pipes in the rock at the bottom of the river and merging them into one 24-in. pipe at either end. Noted Nov. 19.

Cincinnati, Ohio—(Official)—Bids will be received until noon, Dec. 30, by Philip Fosdick, Dir. of Pub. Serv., for c.-i. pipe and specials.

Bids will soon be received by Philip Fosdick, Dir. of Pub. Serv., according to press reports, for the construction of the high-pressure water mains. The estimated cost is $500,000.

Coshocton, Ohio—Plans have been prepared by Chester & Fleming, Consult. Engrs., Union Bank Bldg., Pittsburgh, Penn., for the construction of a 10,00,000-gal. reservoir. Noted July 16.

✚**Dayton, Ohio**—The contract for 5000 tons of c.-i. water pipe and 500 tons of specials has been awarded by the City Commission to UNITED STATES CAST IRON PIPE & FOUNDRY CO., at $126,675. Noted Dec. 17.

Napoleon, Ohio—The city has requested the State Board of Health to extend the time for the construction of a filtration plant. F. C. Dielman is City Engr.

Shadyside, Ohio—An election will soon be held to vote on the question of issuing bonds for $45,000, the proceeds of which will be used for the construction of a water system.

Zanesville, Ohio—The State Board of Health has advised the Council that unless the contract for the installation of a mechanical filtration plant is awarded by June 1, 1915, the Board will withdraw its approval. Roy W. Hocking is City Clk. Noted Dec. 3.

Princeton, Ind.—The Public Service Commission has ordered the installation of a filtration plant in Princeton by June, 1915. The estimated cost is about $18,000. Noted Nov. 26.

✚**Detroit, Mich.**—The contract for 25,000 tons of c.-i. pipe has been awarded to AMERICAN CAR & FOUNDRY CO., at $21.45 per ton.

Menominee, Mich.—(Official)—The W. J. Sherman Co., Consult. Engr., Toledo, Ohio, has been retained by the city to appraise the privately owned water system at Menominee.

✚**Cuba, Ill.**—The contract for installing a water system has been awarded to MONIE & DUNBAR, St. Louis, Mo., at $16,425.

Peoria Heights, Ill.—The Board of Trustees has authorized the installation of a water system estimated to cost $67,000. Noted Apr. 16.

Lake Geneva, Wis.—The installation of new pumps at the plant of the Geneva Water & Light Co. is contemplated. The estimated cost is $13,000. William O'Neill is Supt.

✚**Manitowoc, Wis.**—The contract for laying water mains in 19th and Columbus St. and intersection has been awarded by the Board of Public Works to GRAY, ROBINSON & CO., Manitowoc.

New Richmond, Wis.—Bonds for $12,000 have been sold by the Common Council. Plans will be prepared for the construction of a water system.

Blairstown, Iowa—Plans have been prepared by Harer & Stiles, Grand Ave., Temple, Kansas City, Mo., for the installation of a water system.

Iowa Falls, Iowa—The contract for constructing 9000 ft. of water mains and 8000 ft. of sewers has been readvertised. Bids will be received until Dec. 29 by E. L. Marriage, City Mgr., for this work. Noted Nov. 26.

✚**Hibbing, Minn.**—The contract for 1000 ft. of ¾-in. extra strong lead pipe and five tons of pig lead pipe for the Alice water line construction has been awarded to CRANE & ORDWAY, Duluth, Minn.

Burrton, Kan.—An election will soon be held at which the citizens will vote on the question of issuing bonds for $25,000, the proceeds of which will be used for installation of a water system.

Haven, Kan.—An election will soon be held to vote on the question of issuing bonds, the proceeds of which will be used for the construction of a water system.

Larned, Kan.—Bids will be received until Jan. 18 by L. D. Burgess, City Clk., for the construction of a water system and electric-light plant. Worley & Black, Kansas City, Mo., are the Engrs. Noted Aug. 20.

Pretty Prairie, Kan.—The citizens contemplate spending $17,000 for the installation of a water system.

Pierce City, Mo.—Harper & Stiles, Grand Ave. Temple, Kansas City, Mo., are preparing plans for the improvement of the water system at Pierce City.

Corpus Christi, Tex.—(Official)—The time for receiving bids for the construction of a water system has been extended from Dec. 29 to 4 p.m., Jan. 8, by F. J. Mulligan, City Secy. Noted Dec. 3.

Magnolia Park (Houston post office), **Tex.**—At the election held Nov. 28, the citizens voted in favor of issuing bonds for $134,000, the proceeds of which will be used for the construction of a municipal water system. Noted Nov. 5.

Uvalde, Tex.—The Uvalde Water Works Co. plans to make improvements to its water-works.

Redrock, Okla.—The Benham Engineering Co., Oklahoma City, has been retained by the Board of Trustees to prepare plans for the construction of a water system and electric-light system. The estimated cost is $30,000.

Yale, Okla.—An election will be held, Dec. 31, to vote on the question of issuing bonds, the proceeds of which will be used for the extension of the water system and to construct an electric-light plant. H. Askin, Cushing, Okla., is Engr. Noted Oct. 22.

Albuquerque, N. M.—The Council Committee will soon submit its report on the installation of a municipal water system.

Bailey, Idaho—(Official)—We have been advised that the citizens defeated the question of issuing bonds, the proceeds of which would have been used for the purchase and improvement of the water system. Noted Dec. 10.

Raymond, Wash.—The City Council contemplates purchasing the water system and making improvements and extensions.

✚Seattle, Wash.—The contract for laying water mains in 38th Ave. S. W. has been awarded to D. H. TRAPHAGEN, Arctic Club, Seattle, at $26,864. Noted Dec. 10.

Warden, Wash.—Bids will be received, according to press reports, until Jan. 5 by the City Clerk, for constructing a water system.

✚Oregon City, Ore.—(Official)—The contract for the construction of the South Fork water system has been by the Commission to OREGON ENGINEERING & CONSTRUCTION CO., Oregon City, at $315,000. List of bidders noted Dec. 10.

Warrenton, Ore.—Plans have been prepared by E. H. Green, Engr., Spokane, Wash., for the installation of a water system. The estimated cost is $150,00. Noted Dec. 3.

✚Escondido, Calif.—Contracts have been awarded by the city to HOLLAND CONSTRUCTION CO., Ganger Bldg., San Diego, at $11,494 for constructing a concrete reservoir and to JOHN M. GARDINER CO., Byrne Bldg., Los Angeles, at $55,000 for laying 16 miles of pipe.

Lindsay, Calif.—An irrigation district is being organized, comprising about 24,000 acres, to be irrigated wth water from the Keweah and Tule Rivers. A dam will be constructed in the west end of the Kokohl Valley. G. V. Reed is the organizer.

Red Bluff, Calif.—(Official)—At the election held, Dec. 10, the citizens defeated the bond election for $85,000, the proceeds of which were to be used for the installation of a municipal water system. Noted Dec. 3.

Rio Vista, Calif.—The city contemplates metering all its taps. R. L. Uphan is Supt.

San Diego, Calif.—The La Mesa, Lemon Grove and Spring Valley Irrigation District has bought the Cuyamaca Water Co. in San Diego, and will construct a dam at a cost of $335,000.

Hull, Que.—The city plans to install an 8,000,000-gal. turbine pump and to extend the water mains. The estimated cost is $200,000. J. P. Albert Laforest is City Engr.

★Winnipeg, Man.—(Official)—Bids will be received until noon, Jan. 18, by S. H. Reynolds, Chn. of Comn., Greater Winnipeg Water Supply, for gravel pit excavation, screening, elevating and crushing machinery and for locomotives and cars.

Edmonton, Alta.—The construction of a new filtration plant is contemplated by the city. J. W. Turner is Supt.

Hollyburn, B. C.—Bids will be received until Dec. 28, by G. H. Peake, Municipal Clk., for installing a water system.

Kamloops, B. C.—The City Council plans to spend $75,000 for the extension of the water system and electric-power plant. M. J. Carment is City Clk.

Vancouver, B. C.—Bids will be received until Dec. 28 by G. H. Peeke, City Clk., for the construction of a water system for West Vancouver. The estimated cost is $150,000. Noted Dec. 1.

SEWERS

Boston, Mass.—Bids will be received until Dec. 28, by the Public Works Department, for building catch basins in South Boston and in Dorchester District, also for constructing sewers in Everton St. L. K. Rourke is Comr.

Reading, Mass.—According to press reports the Council plans to enter the Metropolitan Sewer District, of Boston, involving an expense of $224,000. Charles D. Smith, 1 Ashburton Pl., Boston, is Ch. Engr. of the Metropolitan Sewer Bd.

✚Albany, N. Y.—The contract for constructing sewers has been awarded to KATTEUX & DeNALLO, 841 Albany St., Schenectady, at $9490.

Bethlehem, N. Y.—(Official)—The citizens plan to construct a sewer system, estimated to cost $13,000. Plans have been approved by the State Board of Health.

Camden, N. Y.—Plans are being prepared by Morrell Vrooman, Consult. Engr., Gloversville, N. Y., for the installation of a sewer system and sewage treatment works at Camden.

Hamburg, N. Y.—The citizens held a meeting to discuss the question of a new sewer system.

Mount Morris, N. Y.—At a recent election the citizens voted $69,000 in bonds, the proceeds of which will be used for the construction of a sewer system.

Ravena, N. Y.—Morrell Vrooman, Consult. Engr., Gloversville, is preparing plans for the construction of a sewer system and sewage treatment plant at Ravena.

Camden, N. J.—The City Council has adopted an ordinance providing for the installation of sewers in Louis, 26th St., and Harrison Ave.

★Dunellen, N. J.—(Official)—Bids were received, Dec. 7, by the Borough Council for constructing a sewage collecting system. The following are the low bidders: H. K. Corbin, 170 Broadway, N. Y., $82,604; Bruno Pizzamenti, Seneca Falls, N. Y., $84,115 and Di Napoli-Teriello Construction Co., Hackensack, N. J. William P. Deering is Borough Clk. Noted Nov. 12.

Jersey City, N. J.—The City Commission is considering the construction of three sewage disposal plants and several trunk sewers. Michael I. Fagan is City Clk.

Millburn, N. J.—See item under "Streets and Roads."

Summit, N. J.—On Dec. 15, Alexander Potter, Consult. Engr., 50 Church St., New York, N. Y., recommended the adoption of Plan B of the proposed sewage disposal plant. Estimated cost, $22,889. Three plans are under consideration.

Middletown, Del.—(Official)—Pugh & Hubbard, Engrs., Witherspoon Bldg., Philadelphia, Penn., have been retained to prepare plans for the construction of a sewer system and sewage disposal plant. Noted Dec. 3.

Laurel, Md.—Bonds for $80,000 have been sold by the City. The proceeds will be used for the installation of a sewer system and for extending the water system. Noted July 9.

Ocean City, Md.—(Official)—Pugh & Hubbard, Engrs., Witherspoon Bldg., Philadelphia, Penn., have prepared plans for the installation of a sewer system and sewage disposal plant for Ocean City. Work will start in the spring.

Hazlewood (Waynesville post office), **N. C.**—Bonds for $15,000 have been voted by the citizens, the proceeds of which will be used for the construction of sewer and water systems and an electric-light plant. The Mayor is in charge.

Arcadia, Fla.—The J. B. McCrary Co., Third National Bank Bldg., Atlanta, Ga., according to press reports, will make surveys and prepare plans for making extensions to the sewer system.

✚Bradentown, Fla.—The contract for constructing 12,000 ft. of sanitary sewer and 1500 ft. of reinforced concrete and segment block storm sewer has been awarded to BRYAN & CO. and the SOUTH FLORIDA ENGINEERING & CONTRACTING CO., Bradentown.

Brewster, Ohio—Bids will be received by the Village Clerk, until Jan. 2, for the sale of $16,000 in bonds for constructing a sanitary sewer system.

Cleveland, Ohio—(Official)—Bids will be received by the Commissioner of Purchases and Supplies until noon, Dec. 31, for constructing a sewer in East 93d St., from Carr Ave. N. E. to Lake Erie.

Cleveland, Ohio—See item under "Streets and Roads."

Coshocton, Ohio—Plans are being prepared by Chester & Fleming, Union Bank Bldg., Pittsburgh, Penn., for the construction of the proposed sewage disposal plant.

Lorain, Ohio—(Official)—Bids will be received by the Director of Public Service until noon, Dec. 28, for constructing a sanitary sewer in East 35th St. from Clifton to Dallas Ave.

Detroit, Mich.—According to the Park Commissioner a sewage purifying plant will be installed with the $50,000 sewer system of Belle Isle.

Keota, Iowa—(Official)—Bids were received Dec. 9 by the Town Council for (a) sewage disposal plant, (b) pipe and specials, (c) five miles of sanitary sewers, as follows: Thomas Joyce, Kokomo, Ind., (a) $12,252, (b) $1265, (c) $26,013; Cedar Rapids Construction Co., Cedar Rapids, Iowa, (a) $9240, (b) $997, (c) $21,913; C. E. Hughes, Rockford, Ill., (b) $1362, (c) $15,996; J. W. Turner Improvement Co., Des Moines, Iowa, (a) $10,636, (b) $799 (c) $20,067; Western Construction Co., Iowa City, Iowa, (a) $10,729, (b) $1164, (c) $24,178; A. A. Dobson Co., Lincoln, Neb., (a) $11,045, (b) $1205, (c) $24,081; Inter-Mountain Bridge & Construction Co., Tecumseh, Neb., (a) $12,759, (b) $789, (c) $26,178; Alamo Engineering & Supply Co., Omaha, Neb., (a) $10,359, (b) $859, (c) $29,919; D. E. Keeler Co., Davenport, Iowa, (a) $10,071, (b) $1205, (c) $21,163; Birdsall-Griffith Construction Co., Racine, Wis., (a) $9849, (b) $844, (c) $20,687; M. Tschirigi & Sons, Cedar Rapids, Iowa, (a) $9871, (b) $911, (c) $22,293; Cady & Savonell, Sioux City, Iowa (a) $12,758, (b) $1094, (c) $24,780; M. McElligot, Evanston, Ill., $10,098, (b) $729, (c) $22,265; Black Hawk Construction Co., Waterloo, Iowa, (b) $791, (c) $24,183. Noted Nov. 26.

Cherryvale, Kan.—J. N. Sandefur, City Engr., is making surveys for the construction of a sewer system, estimated to cost $15,000.

✚Lawton, Okla.—A contract for constructing a sewer along Gore Blvd. has been awarded to MAYFIELD & SHAW, Fort Bliss, Tex., at $27,000. Noted Oct. 15 and Nov. 26.

Seattle, Wash.—The following bids have been received for construction of sewers in Eli Ave. by Board of Public Works: L. Coluccio, 1642 Lane St., $20,879; L. R. Ellis, $21,806; Thomas Scalza, $22,070; V. Ramaglia, $22,385; Jahn Contracting Co., $22,861; Dicken, Rightmire & Petersen, $21,875; John Allemandi, $28,092.

All bids for the construction of sewers in Leary Ave. have been returned unopened by the Council. Changes in specifications will be made and new bids will be asked.

✚The HARBOR PAVING CO., Aberdeen, at $31,262, received the contract for sewers in 37th Ave. S. and other streets.

Portland, Ore.—The City Commission has rejected all bids for the construction of the Willow St. extension of the East Stark St. trunk sewer and new bids will be invited soon. The work will cost about $175,000.

✚Etna Mills, Calif.—A contract for constructing the sewer system and disposal works has been awarded to E. D. FRITTS at $15,658. Noted Nov. 12 and 26.

✚Los Angeles, Calif.—H. H. KOCH and JOHN CHUTUK were awarded the contract at $7466 for sewer construction in Denker Ave. from Slauson Ave. to 57th St.

Newcastle, Calif.—An addition to the present sewer system will be made, bonds for the purpose having been voted.

South Pasadena, Calif.—This city, together with Pasadena, and Alhambra, will unite in the construction of a joint main line sewer from Pasadena sewer farm to an undetermined point near the Puente foothills.

Stockton, Calif.—Plans have been completed by C. E. Grunsky, San Francisco, for the proposed sewer system.

GARBAGE

✚North Bergen, N. J.—The Township Committee, Dec. 17, awarded the contract to ANTONIO ROSILLA, North Bergen, at about $4000, for the removal of garbage for a period of one year.

Cleveland Heights, Ohio—Bids will be receivel until Dec. 28, by H. H. Canfield, Village Clk., Beckman Bldg., Cleveland, for the removal and disposal of garbage for the period beginning Jan. 1, 1915, to Jan. 1, 1917.

Norwood, Ohio—The city contemplates the construction of an incinerating plant in the spring. Walter G. Franz, Union Trust Bldg., Cincinnati, is Engr.

Sheboygan, Wis.—The Common Council will include in the 1915 budget, an appropriation of $9000 for the installation of a municipal incinerating plant.

Fargo, N. D.—F. La F. Anders, City Engr., writes that he wishes to receive catalogs and other information on scientific means of garbage disposal.

STREETS AND ROADS

Boston, Mass.—Bids will be received until Dec. 28, by the Public Works Department, for a bituminous macadam roadway in Intervale St., Dorchester District. L. K. Rourke is Comr.

✚The contract for constructing a bituminous macadam roadway in Saybrook St. from Market to Dustin St. has been awarded to J. C. COLEMAN & SONS CO., at $6421. Other bids were: A. J. & G. H. McMurtry, $6783; Rowe Contracting Co., $7114; A. De Stefano, $7179; John Landis, $7253; James Doherty, $7260; John F. Beatty, $7304; Martino De Matteo, $7312; John Kelly Co., $7433; William J. Rafferty Co., $8066. Noted Dec. 10.

Providence, R. I.—(Official)—Bids will be received until 2:15 p.m., Dec. 28, for paving certain streets with bitulithic or asphalt pavement. William C. Pelkey is City Clk.

Woonsocket, R. I.—See 'tem under Bridges.

✚**Hartford, Conn.**—The State Highway Commissioner has awarded contracts for road work in: Sherman Township, about 3898 lin.ft. native stone macadam on the Gaylordsville Rd., to the MARCELLO CONSTRUCTION CO., Portsmouth, N. H., at $7408; Winchester Township, about 4645 lin.ft. macadam on the Riverton Rd., to JOHN DE MICHIEL & BRO., Torrington, Conn., at $9488. Noted Nov. 19 and Dec. 10.

✚**Yonkers, N. Y.**—The contract for regulating and grading Winifred Ave. from Bronx River Rd. to Trenchard St. has been awarded to THOMAS F. GRADY, at $37,990.

Hackensack, N. J.—The Bergen County Board of Chosen Freeholders, Hackensack, Dec. 14, authorized a bond issue of $886,000 for road improvements and bridge work.

Jersey City, N. J.—The Board of City Commissioners plans the improvement of Winfield Ave. from the Boulevard to the Morris Canal.

(Official)—Bids will be received until 11 a.m., Dec. 31, by the Board of Commissioners, for improving Sackett St. from Communipaw Ave. to Oak St., with old belgian blocks. Michael I. Fagan is City Clk.

Millburn, N. J.—The cost of proposed road and storm sewer improvements in the Wyoming section of Millburn has been estimated at $95,000. William Byrd, Minnisink Ridge Rd., Short Hills, N. J., is interested.

✚**Montclair, N. J.**—The Town Council, Dec. 14, awarded the contract to the CESTONE CONSTRUCTION CO., Montclair, for the extension of Highland Ave., north to the town line, at $19,757.

New Brunswick, N. J.—The Board of Freeholders has received the following bids for the improvement of the Schalk's Station Rd., South Brunswick Township: J. L. Lecompt, Lakewood, $11,241; Frank Byram, Trenton, $13,959, and the H. N. Scott Contracting Co., Cranbury, $17,191.

✚**Perth Amboy, N. J.**—The Board of Aldermen has awarded a contract for the paving of New Brunswick Ave. with vitrified brick to LIDDLE & PFEIFFER, Perth Amboy.

Baltimore, Md.—Bids will be received by the State Road Commissioners, 601 Garrett Bldg., until Dec. 29, for constructing 3.76 miles of macadam or concrete road along Annapolis Blvd., Anne Arundel County, and 0.61 mile of sheet asphalt on Cathedral St., Baltimore.

Sanford, N. C.—An election will be held Jan. 16, for the purpose of voting on the question of issuing $100,000 in bonds.

Macon, Ga.—According to press reports, an election will be held some time in February to vote on the question of issuing $150,000 in bonds for paving.

Tampa, Fla.—Bids will be received by the Commissioners until Dec. 28, for paving the Plant City Rd. extension from Six-Mile Creek to Plant City. James Riddle is Road Engr. Noted June 11 and July 6.

✚**Birmingham, Ala.**—A contract for improving lower Columbiana Road has been awarded by the Jefferson County Commissioners to A. T. NEWELL & CO.

✚**Aberdeen, Miss.**—(Official)—A contract has been awarded to E. E. MAYE, Amory, at $12,000 for street work, and I. F. SMITH, Amory, at $12,000 for county road work. Noted Dec. 3.

Holly Springs, Miss.—At a recent election the citizens voted in favor of issuing $15,000 in bonds for paving or macadamizing Church St. and the Square. Noted Nov. 26.

Meridian, Miss.—Bids will be received by the Board of Supervisors until Jan. 6 for the sale of $50,000 in bonds for building good roads.

Port Allen, La.—Bids will be received by the Secretary of Police Jury until Jan. 13 for the sale of $75,000 in Road District No. 1 bonds.

Middlesboro, Ky.—An election will be held Feb. 13 for the citizens of Bell County to vote on the question of issuing $250,000 in bonds for constructing roads.

Greenup, Ky.—An election will be held Jan. 19, for the citizens of Greenup County to vote on the question of issuing $200,000 in bonds for road construction.

Cincinnati, Ohio—(Official)—Bids will be received by Philip Fosdick, Dir. Pub. Ser., until noon, Dec. 28, for improving a section of Stratford Ave. and Corbett Ave. from Niles to Griest Ave.

(Official)—Bids will be received by Philip Fosdick, Dir. Pub. Ser., until noon, Dec. 30, for paving Niles Ave. from Delta to Halpin Ave. with brick.

Cleveland, Ohio—(Official)—Bids will be received by Carl A. Palmer, 2847 Broxton Rd., Shaker Heights, Village Clk., until noon, Jan. 19, for improving Paxton Rd., Winthrop Rd., Coventry Rd., Oval Drive, Brighton Rd., Courtland Blvd., Coventry Rd., Oxford Rd., Eaton Rd., Woodbury Rd., Huntington Rd., Elham Rd., Southeington Rd., Onaway Rd., Sebor Rd., Keswick Rd., Albion Rd., Beckett Rd., Ashwood Rd., Hampton Rd., Clarmont Rd., Warrington Rd. and Ludlow Rd., by grading, paving, curbing, constructing sewers and laying water mains.

Coshocton, Ohio—According to press reports, bids will soon be received for paving Roscoe St. from Walhonding bridge to the corporation limits.

East Youngstown, Ohio—(Official)—Bids will be received by C. R. Anderson, Village Clk., until noon, Jan. 4, for paving a section of Wilson Ave.

Fremont, Ohio—Plans are being prepared by C. A. Hochenedel, City Engr., for paving Arch St. Bids will be advertised in the spring.

Galion, Ohio—(Official)—Bids will be received by Commissioners of Morrow and Crawford Counties until noon, Jan. 13, for the construction of the Hershner Joint County Rd. in Washington Township, Morrow County, and Polk Township, in Crawford County. C. O. Higgins is Audr. of Morrow County.

Lima, Ohio—All bids received Dec. 8, by H. J. Lawlor, Clk. of Bd. of County Comrs., for paving 22,000 sq.yd. have been rejected. Contract has been readvertised and bids will be received Jan. 2. Noted Dec. 3.

Mt. Gilead, Ohio—C. C. Higgins, Audr. of Morrow County, will receive bids until Jan. 13 for the construction of a macadamized road in North Bloomfield Township and Sandusky Township, Richland County.

Sandusky, Ohio—Plans and estimates have been submitted by R. L. J. Wager, City Engr., for the proposed paving of Fulton St. from Water to Adams St., estimated to cost $14,800.

Troy, Ohio—(Official)—Bids will be received by the Board of County Commissioners until 10 a.m., Jan. 4, for grading, concreting and macadamizing with asphalt binding the Dayton and Troy Spur and One Mile Assessment Pike. M. T. Staley is County Audr.

Indiana—Bids will be received as follows for road improvements in Indiana:

Wabash, until 2 p.m., Jan. 5, by the Commissioners of Wabash County, for constructing two gravel roads in Liberty Township. D. Showalter is Audr.

Monticello, until 10 a.m., Jan. 5, by the Commissioners of White County, for constructing a road in Big Creek Township. A. G. Fisher is Audr.

New Albany, until 10 a.m., Jan. 7, by the Commissioners of Floyd County, for constructing a gravel road in New Albany Township.

Evansville, Ind.—(Official)—Bids will be received by Carl Laurenstein, Treas. of Vanderburgh County, until 10 a.m., Jan. 2, for the sale of $20,000 in bonds for improving highways.

Muncie, Ind.—(Official)—Bids will be received by the Commissioners of Delaware County, until 10 a.m., Jan. 23, for constructing a gravel road on the Delaware-Henry County line. F. M. Williams is County Audr.

✚**Rochester, Ind.**—A contract for constructing two gravel roads has been awarded by the County Commissioners to McTUENAN BROS., Elwood, Ind., at $29,748. Noted Nov. 19.

✚**Williamsport, Ind.**—A contract for constructing a road in Pine Township has been awarded by the Board of County Commissioners to C. E. GANT, Colfax, Ind., at $6695. Noted Nov. 19.

Kenosha, Wis.—(Official)—Bids will be received by the Street Assessment Committee, until 2 p.m., Jan. 8, for improving Ridge St. from Prairie Ave. to Grand Ave.

Bonham, Tex.—Bids will be received by the Road Commissioners until Dec. 28, for the construction of about 30 miles of roads.

Floresville, Tex.—At the election held Dec. 15, the citizens of Lavernia and Sutherland Springs Districts voted in favor of issuing $30,000 and $18,000 in bonds, respectively. Noted Dec. 10.

Greenville, Tex.—(Official)—Bids will be received by the Board of Permanent Road Commissioners until Jan. 27, for constructing a system of highways in Road District No. 1. Julian C. Field, Division and Greenville, is Consulting Engr.

Las Cruces, N. M.—The Board of Road Commissioners will soon begin the work of improving the roads of this district, for which purpose $45,000 in bonds were issued.

✚**Port Orchard, Wash.**—A contract for improving roads has been awarded by the Commissioners of Kitsap County to NELSON & SHOULE, at approximately $10,000. Noted Oct. 29 and Dec. 3.

Bay City, Ore.—Bids will be received by J. C. McClure, City Recdr., until Feb. 4, for improving a number of streets in the business district, estimated to cost $35,000.

✚**Pendleton, Ore.**—S. RUGO & CO. has been awarded a contract by the Northern Pacific R.R. Co. for 16,000 ft. of concrete sidewalk, covering 14 city blocks.

✚**Portland, Ore.**—The City Commission has awarded a contract for the paving of East 30th St. from Alberta St. to Ainsworth Ave., to OSKAR HUBER, at $17,000.

✚**Roseburg, Ore.**—A contract for constructing two miles of road through Canyon Creek has been awarded to H. J. HILDEBRAND, at $9976. Noted Dec. 3.

Los Angeles, Calif.—According to press reports, bids will be received by the Board of Supervisors until Dec. 28, for improving Cass and Olive St. in Road District No. 42. Estimated cost is $28,500.

Ontario, Calif.—(Official)—Bids were received Dec. 14, by R. O. Brackenridge, City Clk., for improving Euclid Ave. from G St. to the north city limits, as follows: Highway Construction Co., Redlands, Calif., $58,138; H. U. Taylor, Los Angeles, Calif., $72,871; Southern California Construction Co., Ocean Park, Calif., $70,040; Johnson-Shea Co., Riverside, Calif., $67,667; T. E. Schafer, Los Angeles, Calif., $67,484; Hudson, Johnson Co., Los Angeles, Calif., $69,118; Bent & Pennebaker, Los Angeles, Calif., $89,729; Montgomery Co., Alhambra, Calif., $64,419; C. Sharer, Los Angeles, Calif., $69,282; H. E. Cox, Pasadena, Calif., $65,366; E. L. Fleming, Pomona, Calif., $66,039; Andrew Holloway, Pasadena, Calif., $55,139. Noted Dec. 10.

Porterville, Calif.—Press reports state that bids will be received about Jan. 1 for paving approximately 33 streets.

+San Diego, Calif.—M. D. GOODBODY has been awarded the contract at $30,342 for grading Raynard Way, State St. and Goldfinch St. from Laurel to Sutter St.

INDUSTRIAL WORKS

+Boston, Mass.—The contract for the construction of a five-story 50x100-ft. warehouse at Commonwealth Ave. and Roman Terrace, Brighton District, for W. Stanley Tripp, 95 Milk St., has been awarded to L. L. SELLEW, 136 Brighton Ave. Estimated cost, $40,000.

Bridgeport, Conn.—Plans have been prepared for the Standard Mfg. Co., Housatonic Ave., for the construction of a two-story and basement 50x90-ft. addition to its plant.

+Auburn, N. Y.—The Auburn Woolen Co. has awarded the contract to the B. F. SMITH CONSTRUCTION CO., Pawtucket, R. I., for the construction of a five-story and basement 80x120-ft. addition to its plant.

Rochester, N. Y.—The Pennsylvania Feldspar Co., Philadelphia, Penn., plans to rebuild its plant which was recently destroyed by fire, at Rochester, with a loss of $125,000.

Saratoga Springs, N. Y.—Bids are being received by C. G. Anthony, Consulting Engr., State Reservation Commission, for the construction of a spring water bottling plant for the State of New York.

Ligonier, Penn.—The Ligonier Valley R.R. has had plans prepared for the construction of a brick roundhouse 195x200 ft. The estimated cost is $125,000. B. C. Boyle is Master Mechanic.

Marcus Hook, Penn.—The Benzol Products Co., Philadelphia, Penn., plans the construction of a plant at Marcus Hook.

Monongahela, Penn.—The Universal Ice & Cold Storage Co., recently incorporated with a capital of $75,000, plans the construction of a reinforced-concrete ice plant, with a daily capacity of 25 tons; also a cold-storage plant.

+Philadelphia, Penn.—The contract for the construction of a one-story, 61x188-ft. manufacturing and store building at 209-13 North 22d St., for Edward M. Harris, 48 North 23d St., has been awarded to EDWARD CUNNINGHAM, 50 North 23d St. Estimated cost, $12,000.

West Reading, Penn.—The Atlantic Refining Co. plans the construction of a plant, estimated to cost $150,000.

Baltimore, Md.—Plans are being prepared for the construction of a 135x215-ft. warehouse and factory at Bayard and Hamburg St., for the Baltimore Gas Appliance Mfg. Co.

Petersburg, Va.—Plans are being prepared for the construction of three buildings on Madison Ave., from Hamilton Ave. to Park St., for the Wayne Paint Co.

New Orleans, La.—Plans have been prepared by J. E. Otis and W. K. Keenan, Associate Archs., for the construction of a cold-storage and packing plant for the Cudahy Co., at Poydras and Howard St.

New Orleans, La.—The Board of Commissioners of the Port of New Orleans, Dec. 14, received the following bids for the construction of a cotton warehouse and terminal: Jefferson Construction Co., New Orleans, $1,323,444; Durolithic Co., Buffalo, N. Y., $1,399,900; James Stewart & Co., Inc., St. Louis, Mo., $1,466,000; John W. Ferguson Co., Paterson, N. J., $1,467,000; J. A. Zimmerman & Son, New York, N. Y., $1,499,000; Haglin Stahr Co., Minneapolis, Minn., $1,511,000; Gilsonite Construction Co., St. Louis, Mo., $1,518,530; MacArthur Bros. Co., New York, N. Y., $1,600,000; Ferro-Concrete Construction Co., Cincinnati, Ohio, $1,642,000; Wells Bros. Co., New Orleans, $1,659,000; Selden Breck Co., St. Louis, Mo., $1,665,000; Hughes, O'Rourke Construction Co., Dallas, Tex., $1,733,266; Bates & Rogers Construction Co., Chicago, Ill., $1,749,700; H. P. Converse & Co., Boston Mass., $1,765,000; Hunt Engineering Co., Kansas City, Mo., $1,795,000; Doullut & Williams, New Orleans, $1,801,000; George J. Glover, New Orleans, $1,818,816. Ford, Bacon & Davis, 921 Canal St., New Orleans, are Engrs. Noted Nov. 5.

Chattanooga, Tenn.—Plans are being prepared by W. H. Sears for the construction of a plant for William Lippinhardt Wheeling, W. Va. The plant will manufacture enameled sheet steel, iron products, gas stoves and railroad semaphores. Estimated cost, $100,000. Noted Dec. 17.

Lawrenceburg, Ky.—The Kentucky River Stone & Sand Co., Tyrone, has increased its capital stock to $45,000. The company plans the construction of an additional crushing unit, dust plant and machine shops.

Louisville, Ky.—The Reliance Textile & Dye Works, Covington, have plans for the construction of an addition, estimated to cost $25,000.

Columbus, Ohio—John Dewine contemplates constructing a $50,000 grain elevator on a site between the Cleveland, Cincinnati, Chicago & St. Louis Ry. and the Pennsylvania R.R., West Side.

+Toledo, Ohio—(Official)—The contract for the construction of the pedestal concrete pile foundation for the State Hospital laundry has been awarded to the MacARTHUR CONCRETE PILE & FOUNDATION CO., 11 Pine St., New York, N. Y. Marriott, Allen & Hall, Columbus, are Archs.

Big Rapids, Mich.—The Board of Trade of Big Rapids is preparing to construct a two-story and basement, 42x150-ft. factory for the Falcon Mfg. Co.

+Detroit, Mich.—The contract for the steel work on the one-story addition to factories Nos. 2, 3, 6 and 7 on Jefferson Ave. and Connors Creek Rd. for the Hudson Motor Car Co. has been awarded to McCLINTIC-MARSHALL CO.

Kalamazoo, Mich.—The Kalamazoo Vegetable Parchment Co. will construct a 70x327-ft. plant at Kalamazoo.

East St. Louis, Ill.—The Pioneer Box Co., manufacturers of wire-bound boxes, will construct a plant, estimated to cost $75,000.

+Manitowoc, Wis.—The contract for the construction of a $20,000 warehouse for the Chicago & North Western Ry. has been awarded to KULK CO., Freeport, Ill.

+Lexington, Neb.—The contract for the construction of a five-story fireproof reinforced concrete mill for the Lexington Mill & Elevator Co., has been awarded to the BURRELL ENGINEERING CO., Chicago, Ill. The estimated cost is $50,000.

Lincoln, Neb.—The Curtis, Towle & Paine Co. will construct a four-story factory, 60x100 ft., on Seventh and K St.

Hanford, Wash.—The Hanford Fruit Growers Association has purchased a site on the Columbia River for the construction of a warehouse and cold-storage plant.

North Yakima, Wash.—The American Hawaiian Fruit Canneries Co., 409 Hoge Bldg., Seattle, recently incorporated with a capital of $200,000, contemplates constructing by-product plants at North Yakima, Wenatchee and Vashon.

Los Angeles, Calif.—Plans are being prepared by Edward C. Thorne, Arch., Realty Board Bldg., for the construction of a two-story and basement 25x146-ft. factory on San Pedro St., for Wise & Downey, 705 East Seventh St.

Toronto, Ont.—Anderson MacBeth, Ltd., plans the construction of a $50,000 warehouse at King and John St.

FEDERAL GOVERNMENT WORK

Locomotive Crane—Boston, Mass.—Bids will be received by H. R. Stanford, Chief, Bureau of Yards and Docks, Navy Dept., Washington, D. C., until 11 a.m., Jan. 9, for furnishing one 15-ton locomotive crane to the Navy Yard, Boston.

★Storehouse—Fort Strong (Boston post office), **Mass.**—Bids will be received by Capt. H. T. Matthews, Constructing Quartermaster, Port Warren, until noon, Jan. 18, for the construction of a concrete storehouse at Fort Strong.

+Dredging—New Haven, Conn.—The following are the bids received for dredging in New Haven Harbor: Atlantic, Gulf & Pacific Co., Park Row Bldg., New York, N. Y., $56,980; William Beard & Co., 21 State St., New York, N. Y., $78,750; R. G. Packard Co., East 28th St., Bayonne, N. J., $68,600; Timothy J. Dady, 350 Fulton St., New York, N. Y. (Borough of Brooklyn), $108,500; Taylor Dredging Co., Foot Communipaw Ave., Jersey City, $54,600; Metropolitan Dredging Co., 90 West St., New York, $52,080; American Dredging Co., Philadelphia, Penn., $62,300; Coastwise Dredging Co., Norfolk, Va., $54,530; Baystate Dredging Co., Ltd., 247 Atlantic Ave., Boston, Mass., $70,000; Eastern Dredging Co., 172 Condor St., East Boston, Mass., $82,833; Maritime Dredging Co., 80 Broad St., New York, $77,000; Morris & Cumings Dredging Co., 17 State St., New York, $52,080; John A. Seely, 30 Church St., New York, $63,000; P. Sanford Ross, Inc., Jersey City, N. J., $62,650; Furst-Clark Construction Co., Baltimore, Md., $75,250; John H. Gerrish, 101 Tremont St., Houston, $64,400. Noted Nov. 15.

Post Office—Glens Falls, N. Y.—Bids were received as follows for the construction of a post office at Glens Falls, (a) limestone, (b) sandstone: Charles McCaul Co., Philadelphia, Penn., (a) $64,539, (b) $64,939; Charles P. Boland Co., Troy, N. Y., (a) $73,452, (b) $73,700; Lewis P. Fluhrer Co., 220 West 42d St., New York, N. Y., (a) $65,719; Altoria Realty & Construction Co., 3 East 44th St., New York, N. Y., (a) $62,964, (b) $62,964; William H. Egan, 147 East 125th St., New York, N. Y., (a) $65,913, (b) $66,813; Benedetto-Clark & Nugent, Inc., 423 East 115th St., New York, (a) $72,971; Kelly & Kelley, Inc., Long Island City (Borough of Queens), New York, N. Y., (a) $70,600, (b) $71,000; John G. Unkefer & Co., Minerva, Ohio (a) $66,437, (b) $67,187; George B. Wills & Co., Inc., 101 Park Ave., New York, (a) $61,557, (b) $62,000; Westchester Engineering Co., White Plains, N. Y., (a) $66,700, (b) $67,000. Noted Nov. 5.

Pier—New York, N. Y.—(Borough of Brooklyn)—Bids were received as follows, for the construction of a timber and reinforced concrete pier at the New York Navy Yard. The pier is to consist of a reinforced concrete deck, beams, girders and columns, supported on wooden piles and platforms—including paving, railroad and crane tracks, fresh water, salt water and air piping, electric ducts, telephone conduit, manholes, bollards and cleats. The general dimensions are: Length on center line, 677 ft., width, out to out of backing logs, 80 ft. (a) Pier complete, with wood block paving; (b) pier complete, with asphalt paving; (c) pier complete, under alternative plans and specifications. Snare & Triest Co., 233 Broadway, New York, (a) $148,730; (b) $144,980; (c) $149,400. C. R. Simpson, 170 Broadway, New York, (a) $179,352; (b) $176,352; (c) $175,940. Henry Steers, Inc., 17 Battery Place, New York, (a) $161,720; (b) $156,100; (c) $153,870. McHarg-Barton Co., 171 Madison Ave., New York, (a) $166,540; (b) $161,140; (c) $144,474. Noted Dec. 3.

Gasoline Cutter—Philadelphia, Penn.—All bids received by Col. George A. Zinn, Witherspoon Bldg., Philadelphia, for constructing and delivering a gasoline cutter, wooden hull and house, have been rejected. New bids will soon be requested.

+Storage Tanks—Washington, D. C.—The contract has been awarded by the Bureau of Yards and Docks, Navy Department, Washington, D. C., for the construction of nine fuel oil storage tanks, 2,100,000 gal capacity, to be erected at Norfolk, Va.; Mare Island, Calif.; Puget Sound, Wash.; San Diego, Calif., and Melville, R. I., to the PITTSBURG-DES MOINES STEEL CO., Curry Bldg., Pittsburgh, Penn., at $120,136. Noted Dec. 17.

Building—Washington, D. C.—Bids were received as follows, by the Commissioners of the District of Columbia, for the construction of a repair shop for the Water Department, on Bryant St. near Second St., Washington, D. C.: Andrew Murray, $21,700; A. L. Smith & Co., $19,100; Melton Construction Co., $18,100; Westchester Engineering Co., White Plains, N. Y., $28,256; Skinker & Garrett, $20,753; A. M. Poynton, $21,000; J. L. Marshall, $19,154; J. L. Robinson Construction Co., Baltimore, Md., $23,200; W. E. Mooney, $19,945; Charles A. Langley, $20,573; H. B. Davis, $21,400; Richardson & Burgess, $21,006; M. A. Weller, $19,149; Upton-Smoot Construction Co., $19,487. Above bidders are of Washington, D. C., unless otherwise specified.

Grading—Arlington, Va.—The following are the bids received for leveling, grading and paving around the site of the Maine Memorial, Arlington National Cemetery, (1) complete, as specified; (2) omitting concrete foundations under B, C and D; (3) complete, as specified between A and B, including drain; (4) complete, as specified in area B, C and D, including all drains; (5) additional each for catch basins; (6) additional for headers; (7) additional per foot for 8-in. terra cotta pipe; (8) 10-in.; (9) 8-in. Y's; (10) 10-in.: R. J. Beall Construction Co., Washington, D. C., (1) $8344, (2) $6394, (3) $1984, (4) $6784, (5) $16.75, (6) $16.75, (7) 60c., (8) 75c., (9) $1, (10) $1.25; Charles H. Tompkins, Washington, D. C., (1) $9700, (2) $6250, (3) $2350, (4) $7350, (5) $20, (6) $25, (7) 55c., (8) 65c., (9) $2, (10) $2.50; L. M. Johnston, Washington, D. C., (1) $11,100, (2) $7665.40; (3) $2679.70, (4) $8720, (5) $26, (6) $30.50, (7) 42c., (8) 53c., (9) $1.50, (10) $1.80; Lyons Bros., Washington, D. C., (1) $11,000, (2) $7545, (3) $2650, (4) $9000, (5) $15, (6) $12, (7) 35c., (8) 45c., (9) 50c., (10) 55c. Noted Dec. 10.

Building—Arlington, Va.—The following bids were received for constructing a memorial amphitheater and chapel in the Arlington National Cemetery, (a) Clarendon marble, (b) South Dover marble, (c) Blue Ridge marble, (d) Colorado Yule marble, (e) Vermont marble, (f) Danby, Vt., marble, (g) Georgia Tate, (h) Amicicola, (i) Victoria, Tenn., (j) Marvelia, (k) Lee, Mass., marble, (l) Southern marble, (m) white Tennessee marble, (n) B. & A. Williams Co. marble, (x) additional price for concrete, per cu.yd.: Jacob & Youngs, Inc., 120 West 32d St., New York, N. Y., (a) $569,900, (b) $611,400, (x) $8; John Thatcher & Son, 60 Park Ave., New York, N. Y. (Borough of Brooklyn), (a) $549,425, (b) $563,573, (c) $604,265, (d) $654,500, (e) $547,400, (x) $8.25; Norman Ker Co., 1123 Broadway, New York, N. Y., (b) $603,000, (d) $717,000, (f) $576,000, (g) $612,000, (x) $8.50; J. E. & A. L. Pennock, Land Title Bldg., Philadelphia, Penn., (b) $566,000, (f) $551,000, (h) $572,000, (x) $12.60; Marble Arch Co., 216th St. and Broadway, New York, N. Y., (b) $588,000, (d) $685,000, (f) $575,000, (g) $608,000, (x) $12; Durolithic Co., Buffalo, N. Y., (e) $655,000, (x) $12; Charles McCaul Co., 1715 Sansom St., Philadelphia, Penn., (a) $546,800, (b) $555,800, (d) $651,800, (h) $548,800, (i) $561,800, (x) $9.50; George E. Wyne, Munsey Bldg., Washington, D. C., (b) $555,500, (d) $634,500, (f) $538,000, (g) $595,500, (h) $542,500, (x) $7; P. F. Gormley Co., Washington, D. C., (b) $575,771, (d) $658,340, (f) $558,673, (g) $596,107, (h) $568,059, (j) $817,508, (k) $808,749, (x) $8; Thomas Riley, 1616 Thompson St., Philadelphia, Penn., (b) $558,315, (d) $654,000, (f) $532,400, (g) $558,200; (x) $10; Thomas O'Riley, 30 E. 42d St., New York, (b) $531,000, (d) $710,000, (f) $586,000, (g) $611,000, (h) $623,000, (x) $8.50; George Baker Long, Worcester, Mass., (b) $578,500, (d) $650,000, (f) $549,000, (g) $598,000, (h) $583,000, (x) $12; John H. Parker Co., 315 Fourth Ave., New York, N. Y., (a) $525,759, (b) $540,495, (d) $625,223, (f) $523,527, (g) $580,390, (h) $532,313, (j) $775,549, (x) $8; Wells Bros. Co., New York, N. Y., (b) $567,500, (f) $579,000, (g) $597,000, (x) 65c.; Boyle-Robertson Construction Co., Washington, D. C., (a) $554,407, (b) $568,007, (c) $573,507, (d) $645,507, (f) $543,507, (h) $552,507, (k) $798,507, (x) $7.75; Arthur Cowsill, Washington, D. C., (a) $571,428, (b) $583,000, (d) $678,000, (f) $583,000, (g) $594,200, (i) $690,000, (x) $7.40; Norcross Bros., Washington, D. C., (b) $555,000, (d) $634,570, (f) $527,000, (g) $570,000, (l) $499,000, (x) $6; P. J. Carlin Construction Co., 1123 Broadway, New York, N. Y., (a) $561,000, (b) $579,000, (d) $680,000, (f) $579,000, (g) $599,000, (h) $583,000, (x) $9; Irwin & Leighton, 126 North 12th St., Philadelphia, Penn., (b) $539,800, (f) $529,800, (h) $537,800, (x) $8.75; George A. Fuller Co., Washington, D. C., (d) $607,000, (f) $519,000, (m) $663,800, (x) $8; Conners Bros. Co., Worcester, Mass., (a) $553,800, (c) $596,000, (d) $654,000, (f) $553,800, (g) $596,000, (h) $571,000, (n) $576,000, (x) $12; James L. Parsons, Washington, D. C., (b) $625,000, (f) $625,000, (g) $644,000, (h) $633,000, (j) $858,000, (k) $850,000, (x) $10. Noted Nov. 19.

✚**Foundation**—Augusta, Ga.—The contract for laying the foundation for the U. S. post office at Augusta has been awarded to the McARTHUR CONCRETE PILE & FOUNDATION CO., 11 Pine St., New York, N. Y.

Post Office—Thomasville, Ga.—Bids were received as follows for the construction of a post office at Thomasville, (a) limestone, (b) sandstone: Westchester Engineering Co., White Plains, N. Y., (a) $51,776, (b) $53,000; Wieland-Boggs & Co., Spartansburg, Ga., (a) $58,105, (b) $58,620; J. L. Crouse, Greensboro, N. C., (a) $57,100, (b) $57,600; George W. Stiles Construction Co., Chicago, Ill., (a) $57,603; William H. Fissell & Co., New York, N. Y., (a) $57,700, (b) $58,400; Algernon Blair, Montgomery, Ala., (a) $58,638, (b) $59,000; George A. Clayton, Atlanta, Ga., (a) $57,300, (b) $57,900; James Devault, Canton, Ohio, (a) $56,140, (b) $56,640; T. S. Monday & Co., Chattanooga, Tenn., (a) $72,800, (b) $72,500. Noted Nov. 12.

✚**Post Office**—Jellico, Tenn.—The contract has been awarded to WILLIAM H. FISSELL & CO., 1133 Broadway, New York, for the construction of a post office at Jellico at $63,181. Noted Sept. 10, and Oct. 28.

★**Reconstructing Pier**—Michigan City, Ind.—Bids will be received by Lieut.-Col. W. V. Judson, U. S. Engineer Office, Chicago, Ill., until 10 a.m., Jan. 19, for reconstructing with piles and timber part of the East Pier in Michigan City Harbor.

✚**Improving Post Office and Court House**—Detroit, Mich.—The contract has been awarded to JOHN FINN & SON, 234 Fort St., Detroit, Mich., for the construction of an extension to the Detroit post office at $49,500. Noted Oct. 22 and Dec. 3.

✚**Post Office**—Robinson, Ill.—The contract for the construction of a post office at Robinson has been awarded to A. W. LANE, 19 South La Salle St., Chicago, Ill., at $42,652. Noted Nov. 5 and Dec. 10.

✚**Post Office**—Sparta, Wis.—The contract has been awarded for the construction of a post office at Sparta to JAMES DEVAULT & CO., Canton, Ohio, at $46,638. Noted Oct. 29 and Dec. 3.

Post Office—Chanute, Kan.—Bids will be received by Oscar Wenderoth, Super. Arch., Treasury Dept., Washington, D. C., until 3 p.m., Jan. 29, for the construction of a one-story and basement stone and brick post office.

Building—Fort Leavenworth, Kan.—Bids will be received by the Constructing Quartermaster until 11 a.m., Jan. 1, for constructing an addition to the radio building and for the general construction of a library building.

✚**Post Office**—Mandan, N. D.—The contract for the construction of a post office at Mandan has been awarded to GEORGE W. STILES CONSTRUCTION CO., Rookery Bldg., Chicago, Ill., at $47,245. Noted Aug. 20 and Oct. 1.

★**Canal Work**—St. Ignatius, Mont.—The following are the bids received for earthwork and excavation in connection with the canal construction on the Flathead Project: A. L. Markhus, Polson, Mont., $16,570; Charles Wilhite & Co., $17,000; Wilson Bros., $19,447; Temple & Siroky, $21,177; T. H. Lynch, $28,300. Noted Nov. 12.

Post Office—Bryan, Tex.—The following bids were received for the construction of a post office at Bryan, Tex., (a) limestone with stucco-facing; (b) limestone with brick-facing; (c) sandstone with stucco-facing; (d) sandstone with brick-facing: George A. Shaul, Seneca, Kan., (a) $41,353; (b) $43,373. T. B. Hubbard, Bryan, Tex., (a) $43,799; (b) $47,623; (c) $44,084; (d) $48,264. J. G. McKnight, Hallettsville, Tex., (a) $44,190; (b) $45,940. Schafer & Kreipke, El Reno, Okla., (a) $45,687; (b) $47,357. Noted Nov. 5.

✚**Hull**—Portland, Ore.—The contract for the construction of the wooden hull to be used as a combination dredge and snagboat, has been awarded to the WILLAMETTE IRON & STEEL WORKS, Portland. Noted Oct. 29 and Nov. 19.

Post Office—Ennis, Tex.—Bids will be received until 3 p.m., Jan. 25, by Oscar Wenderoth, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a two-story and basement brick and terra cotta post office.

Buildings—Fort Kamehameha (Honolulu post office), H. T.—Bids will be received by the Constructing Quartermaster, Honolulu, until 11 a.m., Dec. 31, for constructing 48 frame buildings.

Locomotive Cranes—Pearl Harbor, H. T.—Bids will be received by H. R. Stanford, Chief, Bureau of Yards and Docks, Navy Dept., Washington, D. C., until 11 a.m., Jan. 23, for furnishing two 15-ton locomotive cranes at the naval station, Pearl Harbor.

Cranes—Pearl Harbor, H. T.—The following are the bids received for furnishing three electric traveling shop cranes at the naval station, Pearl Harbor, (a) 3 cranes delivered, (b) deduct from (a) if crane is of two-motor type, (c) cranes, complete: Cleveland Crane & Engine Co., Wickliff, Ohio, (a) $12,745, (b) $165; Whiting Foundry Equipment Co., Harvey, Ill., (a) $13,400, (b) $150, (c) $12,800; Morgan Engineering Co., Alliance, Ohio, (a) 20-ton, $5900, 10-ton, $4865, three-ton, one-motor, $3360, (b) three-ton, two-motor, $3200; Manning, Maxwell & Moore, New York, N. Y., (a) $11,250, (b) $170, (c) $9483; Pawling & Harnischfeger Co., Milwaukee, Wis., (c) $15,900; Niles-Bement-Pond Co., New York, N. Y., (a) $12,975, (b) $175. Noted Dec. 3.

Miscellaneous Supplies—Panama—Bids will be received by Maj. F. C. Boggs, Gen. Pur. Officer, Panama Canal Comn., Washington, D. C., until 10:30 a.m., Dec. 28, for furnishing, by steamer, free of all charges, on dock at either Colon, Atlantic port, or Port of Ancon, Balboa, Canal Zone, Pacific port, Isthmus of Panama, iron and bronze castings, wire cable, sheet copper, manila rope, rock salt, muriatic acid, white zinc, red lead, white lead, linseed oil, blank books and paper.

MISCELLANEOUS

★✚**Tunnel**—Boston, Mass.—(Official)—The following bids were received, Dec. 15, by the Boston Transit Commission, for the construction of Section E, Dorchester Tunnel: P. McGOVERN & CO., 1 Madison Ave., New York, $1,955,375 (awarded contract); Bruno & Petitti, 18 Tremont St., Boston, $2,077,150; Holbrook, Cabot & Rollins Corporation, Beacon St., $2,089,795; Hugh Nawn Contracting Co., 82 Savin St., Roxbury, $2,155,750; Coleman Bros., Boston, $2,180,150; Flinn-O'Rourke Co., Inc., 17 Battery Pl., New York, $2,211,200; Rowe Contracting Co., 1607 Commonwealth Ave., Boston, $2,271,500; James J. Coughlan Co., 43 Tremont St., Boston, $2,277,525; William J. Shiels, 234 State St., Boston, $2,340,400; Degnon Contracting Co., 30 East 42d St., New York, $2,558,490. E. S. Davis, 15 Beacon St., is Ch. Engr. Noted Nov. 26.

Grand Stands—Boston, Mass.—The Boston American League Baseball Club, James E. Gaffney, Pres., is having plans prepared for the construction of new grand stands having a seating capacity of 45,000. According to reports the stands will be in the shape of a bowl similar to the one at Yale. James E. McLoughlin, 111 Devonshire St., is Arch.

Barge Canal Bonds—Albany, N. Y.—According to press reports, as a result of a conference between Governor-Elect Whitman, State Engineer-Elect Williams and Superintendent of Public Works-Elect Wotherspoon, the new administration has decided to ask for an additional issue of Barge Canal bonds amounting to $25,000,000. This amount will be necessary if the canal is to be completed in two years, as planned.

Dock Walls—Albany, N. Y.—The Common Council has passed an ordinance which has been signed by Mayor Stevens, making an appropriation of $60,000 for constructing dock walls along city property in connection with the improvement of the water front.

Motor Fire Apparatus—New York, N. Y.—(Borough of Manhattan)—(Official)—The following bids were received on Dec. 14, by Robert Adamson, Fire Comr., for furnishing the fire department with 20 motor driven hose wagons: International Motor Co., West End Ave., New York, at $73,580; American-La France Fire Engine Co., Elmira, N. Y., $75,600; Robinson Fire Apparatus Mfg. Co., St. Louis, Mo., $77,894. Noted Dec. 10.

Motor Tractors—New York, N. Y.—(Borough of Manhattan)—(Official)—The lowest bid submitted to Marcus M. Marks, Pres. of the Borough, for furnishing and delivering six motor tractors was that of the Sternberg Motor Truck Co., at $18,457.

★✚**Subway, New York, N. Y.**—(Borough of Brooklyn)—(Official)—The Public Service Commission has awarded the contract for the reconstruction of the De Kalb Ave. station of the Fourth Ave. subway to SAMUEL BESKIN, Beacon, N. Y., at $133,974. Noted Nov. 19, Dec. 3.

✚**Motor Fire Apparatus**—Orange, N. J.—The City Commission, Dec. 14, awarded the contract for furnishing the fire department with motor fire apparatus, to the WHITE CO., Main St., East Orange, N. J., at $18,450.

✚**Excavation and Concrete Work**—Point-no-Point, N. J.—The Public Service Electric Co. has awarded the contract for excavation and concrete work to the SNIDE & GRIFFITH CO., at $167,995.

Dock—Roosevelt, N. J.—At a special election the citizens voted a bond issue of $18,500 for the erection of a municipal dock on the site of the present Radley dock.

✚**Concrete Coal Bunkers**—Chester and Tacony, Penn.—The Philadelphia Electric Co. has awarded contracts to the DREHMANN PAVING CO., at $10,000, for constructing reinforced-concrete coal bunkers at its plants in Tacony and Chester.

Skylights and Roofing for Piers—Philadelphia, Penn.—(Official)—Bids will be received until noon, Jan. 4, by George W. Norris, Dir., Dept. Wharves Docks and Ferries, 555 Bourse Bldg., Philadelphia, for installing skylights, roofing, erecting cargo doors and chutes at Piers 38 and 40, South Delaware River. For details see advertisement under "Contracts to Be Let."

Subway—Cumberland, Md.—Surveys have been completed and plans prepared for the construction of the Green St. subway for the elimination of the grade crossing at the Baltimore & Ohio Ry. tracks. The city and the railway company will share jointly in the cost, which is estimated at about $62,000. Noted Oct. 29.

Natatorium—Espiritu Santo Springs (Safety Harbor P. O.), Fla.—The Espiritu Santo Springs Co. plans to build a Turkish bathhouse and swimming pool estimated to cost $25,000. W. E. Sinclair is Gen. Mgr.

Docks—Jacksonville, Fla.—The Port Commissioners have ordered Frederick Bruce, City Engr., to prepare estimates for the construction of the proposed municipal docks.

Drainage—Pinellas Park, Fla.—(Official)—Bids will be received by the Supervisors of Pinellas Park Drainage District until Dec. 30 for constructing approximately one hundred miles of ditches, including 1¾ miles of channel, 100 ft. wide; 1½ miles of channel, 50 ft. wide; 2½ miles of channel, 30 ft. wide; all 3 ft. below low tide level. C. M. Dechant is Ch. Engr.

Steel Furniture—Tampa, Fla.—Bids will be received until Jan. 2, by D. B. McKay, Pres. Bd. Pub. Wks., for furnishing steel furniture for the city mill.

Seawall—West Palm Beach, Fla.—(Official)—Bids will be received until Jan. 5 by L. T. Lockwood, Pres. City Council, for the construction of a seawall. The work will include 1350 cu.yd. reinforced concrete, 73 tons of steel reinforcement, 99,000 cu.yd. fill and 2415 sq.yd. of sidewall. In October the city voted an issue of $100,000 in bonds to construct this wall. J. B. McCrary Co., Atlanta, Ga., are Engrs. Noted Oct. 8.

Arena—New Orleans, La.—The New Orleans Auditorium and Athletic Assn. has had plans prepared for the construction of an arena, 215 ft. in diameter. It will have a seating capacity of 10,000. W. R. Burk, New Orleans, is the Arch.

Steel Pipe for Drainage System—New Orleans, La.—The following bids were received on Dec. 1 by the Sewerage and Water Board Commission for furnishing riveted steel pipe for drainage system, including 75,000 lb. 12-in. riveted steel suction pipe, 65,000 lb., 12-in. discharge pipe and 7000 lb. 60-in. riveted-steel constant-duty discharge pipe: John H. Murphy, $9805; Chicago Bridge & Iron Works, $10,380; McAleenan Bros. Co., $13,680; Memphis Steel Construction Co., $13,949; Treadwell Construction Co., $14,600.

Levee Work—Memphis, Tenn.—The Mississippi River Commission, First and Second Districts, will receive bids until, Dec. 28, at Room 20, Custom House Bldg., Memphis, for 700,000 cu.yd. of levee work.

Stadium—Lexington, Ky.—The State University of Kentucky plans the construction of a stadium, estimated to cost about $25,000.

Drydock—Chicago, Ill.—According to press reports, the American Shipbuilding Co. will receive bids for the construction of a 750-ft. reinforced concrete drydock at its yards on the East Side in South Chicago. The estimated cost is $250,000.

★**Drainage**—Peoria, Ill.—Bids will be received until 9:30 a.m., Jan. 20, by J. H. Best, Secy., Fabius Drainage District, Illinois State Bank, Quincy, Ill., for the construction of levees, ditches and diversion channels. The work will involve about 2,000,000 cu.yd. of fill and excavation. Jacob A. Harmon, Peoria, Ill., is Ch. Engr. For details see advertisement under "Contracts to Be Let."

Excavation—Marengo, Iowa—Bids will be received by Charles E. Zoff, County Audr., until noon, Dec. 30, for construction in Drainage District No. 3, which involves about 22,500 cu.yd. of excavation.

Ditch—Ada, Minn.—Bids will be received until Jan. 12 by the county auditor, Ada, for constructing Judicial Ditch No. 52, Norman and Polk Counties. The work will include 470,000 cu.yd. excavation; construction of 27 bridges; and erection of reinforced-concrete and corrugated iron culverts. The estimated cost of the excavation is $47,071; that of the bridges and culverts, $24,820.

Park-Bonds—Duluth, Minn.—(Officials)—Bids will be received until, Jan. 4, by F. J. Vass, Comr. of Finance for the purchase of $50,000 in bonds. The proceeds to be used in park improvements and the purchase of new park land. Noted Nov. 26.

Ditch—Duluth, Minn.—A meeting will be held on Jan. 8 by the Board of County Commissioners for the report on County Ditch No. 2. This ditch will be 93 miles in length and will drain 80,000 acres. The estimated cost is $185,000. The work will include earth and rock excavation, road and bridge construction, and the laying of culverts. E. K. Coe is County Engr.

Ditches—International Falls, Minn.—The contracts for the construction of several ditches involving about 199 miles of excavation, will soon be awarded. The estimated cost is $547,000. E. W. Kibbey is Engr.-in-Charge.

Ditch—Marshall, Minn.—All bids received on Dec. 7 by the County Commissioners for the construction of County Ditch No. 13 have been rejected. E. S. Shepard is County Audr. Noted Nov. 5 and 19.

✚The contract for constructing County Ditch No. 14 has been awarded to the TRACY TILE CO., Tracy, Minn., at $10,496.

Drainage—Wynne, Ark.—The lowest bid received by W. H. Newsom, Engr., Drainage District No. 2, Crittenden County, for 5,164,000 cu.yd. of floating dredge work, was that of Wills & Sons, Paragould, at $430,000. Noted Nov. 26.

Drain—Houston, Tex.—Bids will be received until 10 a.m., Dec. 28, by H. L. Washburn, County Audr., Harris County, for the construction of the Adlong drain. Plans on file at the office of the County Engineer.

Dredging—Port Arthur, Tex.—The West India Molasses Co. plans to dredge a 60-ft. slip near its plant for docking facilities.

✚**Concentrating Tables**—Globe, Ariz.—The Inspiration Copper Co. has awarded a contract to the DEISTER MACHINE CO., Fort Wayne, Ind., at $150,000, for installing all the concentrating tables at its mill.

Dikes—Kelso, Wash.—The bond issue of $60,000 has been disposed of; plans have been prepared; and bids will soon be received for the construction of the proposed dikes.

✚**Trestle**—Port Angeles, Wash.—The contract for constructing the pile trestle on Front, Valley and Cherry Sts., has been awarded to P. J. WOOD, at $31,000. Charles J. Filion, Port Angeles, is the Engr.

Wharf—Seattle, Wash.—The Standard Oil Co. has filed plans with the Port of Seattle Commission for a reinforced-concrete wharf to be constructed in the East Waterway. The estimated cost is about $250,000.

Bulkhead—Seattle, Wash.—City Engineer A. H. Dimock has completed plans for the construction of a 1190-ft. gravity bulkhead along the western front of Railroad Ave., between Madison and Washington St. Bids will be received shortly after the first of January. The estimated cost is about $450,000. A. L. Valentine is Chn., Bd. Pub. Wks.

✚**Dock**—Seattle, Wash.—The Grand Trunk Pacific Ry. Co. has awarded the contract for the construction of its dock to NETTLETON, BRUCE & ESCHBACH, Seattle, at $75,000. Noted Nov. 26.

Dredging—Long Beach, Calif.—Bids will be received soon by the Board of Public Works for dredging the entrance to Long Beach harbor, to an average depth of 18 ft. at low tide. The estimated cost is about $20,000. Noted Oct. 22.

Fire Equipment Bonds—Los Angeles, Calif.—The Fire Commission contemplates a bond issue of $1,000,000 for the complete equipment of the fire department.

✚**Carbarn**—San Francisco, Calif.—The Works Board has awarded the contract for the construction of the municipal railway carbarn on 17th St. to the CLINTON FIREPROOFING CO., at $195,500.

✚**Elevators**—Montreal, Que.—The Department of Public Works, Ottawa, has awarded the contract for installing two passenger and six freight elevators in the Examining Warehouse, to the OTIS-FENSOM ELEVATOR CO., Toronto, Ont.

✚**Elevators**—Ottawa, Ont.—The Department of Public Works has awarded the contract for furnishing and installing three passenger elevators and one freight elevator in the Langevin Bldg., to the GENERAL SUPPLY CO. OF CANADA, LTD.

Steel Work—Toronto, Ont.—Bids will be received by Armand Malo, St. Jerome St., Toronto, for furnishing the steel necessary for the construction of a three-story, 25x100-ft. stable. The estimated cost of the building is $20,000. S. Comber, 1215 Green Ave., is Arch.

✚**Breakwater**—St. John, N. B.—The contract for the extension of the breakwater from West St. John to Partridge Island has been awarded to the MARITIME DREDGING & CONSTRUCTION CO. by the Department of Public Works at Ottawa.

Locomotives and Cars—Winnipeg, Man.—(Official)—See item under "Water Supply—Irrigation."

Bathhouse—Vancouver, B. C.—The Vancouver Salt Water Baths, English Bay, has had plans prepared for the erection of a 60x150-ft. bathhouse. The estimated cost is $75,000. Emil Guenther, Northwest Trust Bldg., Vancouver, is Arch.

BUILDINGS

Boston, Mass.—Plans are being prepared by Harrison H. Atwood, Arch., 61 Alban St., for a $300,000 school on Fremont St.

Montpelier, Vt.—According to press reports, the Board of Trade has appointed a committee to investigate a site for a $40,000 theater. H. T. Caton, Claremont, N. H., is interested.

✚**Cranston, R. I.**—The contract for constructing additions to the State Insane Hospital has been awarded to W. L. MELLEN, 393 Main St., Worcester, Mass., Estimated cost, $275,000. Martin & Hall, 806 Union Trust Bldg., are the Archs.

Providence, R. I.—Bids will be received until January, 191[illegible] for the construction of a two-story school on Laurel Hill Ave. Estimated cost, $80,000. Charles V. How, Turks Head Bldg. is the Arch.

Providence, R. I.—Bids will soon be received by the Board of Contract for the construction of a $55,000 police station.

New York, N. Y.—(Borough of Bronx)—The construction of a five-story apartment on Vermilyea Ave., between Isham and 211th St., is contemplated by the Aldus Construction Co., Inc., to cost $100,000. Jacob S. Kahn, 600 West 181st St., is interested.

(Borough of Queens)—Plans are being prepared by Edward Hahn, Bridge Plaza, for the construction of a five-story, 50x82-ft. building on Jamaica Ave., between Eighth and Ninth Ave., for the Reliable Building Co., 1404 Second Ave. Estimated cost, $50,000.

(Borough of Queens)—Preliminary plans are being prepared by Frank Braun, 585 Ninth Ave., Astoria, L. I., for the con-

struction of a five-story, 50x90-ft. building for A. Rikel, 574 Ninth Ave. Estimated cost, $40,000.

Arlington, N. J.—Isaac Dolgan, Kearney, plans to construct two adjoining four-story buildings on Kearney Ave. and Dukes St. Estimated cost, $40,000.

Newark, N. J.—Bids are being received by the Common Council for constructing additions and alterations for the hospital on Camden St. Estimated cost, $70,000. H. V. & J. J. King, Union Bldg., Newark, are Archs.

Ridgewood, N. J.—The Board of Education contemplates constructing a $250,000 High School on Ridgewood Ave. H. S. Willard is Pres. of Bd.

Trenton, N. J.—Bids will soon be received by the Board of Education for the construction of the Junior High School on Princeton Ave., to cost $250,000.

Woodstown, N. J.—Plans are being prepared by A. W. Dilks for the construction of a high school, 65x90 ft. Estimated cost, $55,000.

Greensburg, Penn.—Bids will be received about Feb. 1 for the construction of a one-story and basement bank building for the Westmoreland National Bank. Estimated cost, $50,000. E. E. Bailey Co., Oil City, Penn., is Arch. Noted Sept. 24.

+Harrisburg, Penn.—According to press reports, the Pennsylvania R.R. has awarded a contract to the BROWN-KING CONSTRUCTION CO., Philadelphia, for constructing freight stations in the southern section of the city.

Philadelphia, Penn.—Preliminary arrangements are being made for the construction of a two-story, 75x90-ft. synagogue for the Beth El congregation. Estimated cost, $50,000.

Philadelphia, Penn.—Plans have been prepared for the construction of a four-story, 98x145-ft. apartment at 12th St. and the City Line, for Charles E. Oelschlager. Estimated cost, $200,000.

Pottsville, Penn.—Plans are being prepared by F. X. Reilly, Arch., Pottsville, for altering and making additions to a school at Pottsville. Estimated cost, $50,000.

Scranton, Penn.—The Directors of the Scranton Life Insurance Co. are having plans prepared for the construction of a 12-story fireproof building to cost $300,000.

Towanda, Penn.—Pierce & Bickford, Archs., Elmira, N. Y., are preparing plans for a two-story and basement high school, to be constructed at a cost of $90,000.

Baltimore, Md.—Bids will be received by Israel Silberstein, 812 Equitable Bldg., Baltimore, until Jan. 15, for the construction of an apartment at Callow Ave. and Park Front Terrace. Estimated cost, $55,000. Stanislaus Russell is Arch.

Richmond, Va.—Bids will be received until Jan. 4 by the Board of Police Commissioners, for the construction of a building, 60x140 ft., at Smith and Marshall St. Estimated cost, $45,000. Carneal & Johnston, Chamber of Commerce, are Archs.

Roanoke, Va.—All bids received for the construction of a building at 11th Ave. and Franklin Rd. for Christ Episcopal Church have been rejected. The plans will be revised by Frederick W. Mann, Arch., Minneapolis, Minn., and C. H. Hinnant, Arch., Roanoke. Estimated cost, $40,000. New bids will be asked.

+Charleston, W. Va.—The contract for the high school to be constructed at Charleston has been awarded to the ROACH-BRUNER BUILDING CO., 609 Johnston Bldg., Cincinnati, Ohio, at $150,000. Noted Dec. 10.

Asheville, N. C.—Plans are being prepared by W. H. Lord, Arch., 17 Church St., for additions to be made to the Mission Hospital, to cost $50,000.

Tampa, Fla.—Plans have been prepared by F. G. Kennard for the construction of an 11-story hotel on Lafayette St. for W. C. Black, 11 Giddens Bldg., Tampa, and others. Estimated cost, $500,000.

+Montevallo, Ala.—The contract for the construction of a three-story, 80x150-ft. science building for the Alabama Girls' Technical Institute has been awarded to R. V. LABAREE, Birmingham, at $60,000. Noted Sept. 17.

Vivian, La.—Bids will be received by Edward F. Neild, Arch., Shreveport, until Jan. 2, for the construction of a public school at Vivian. Estimated cost, $65,000. Noted Dec. 3.

Chattanooga, Tenn.—The First Methodist Church contemplates constructing a $50,000 building at Chattanooga. J. W. Adams is Pastor.

Louisville, Ky.—John Bacon Hutchings, Arch., Columbia Bldg., is preparing plans for the construction of a $300,000 Y. W. C. A. building.

Cleveland, Ohio—Plans are being prepared by S. H. Weiss, Arch., for the construction of a $150,000 bank building, for the State Banking & Trust Co., 734 Euclid Ave. C. R. Dodge is Vice-Pres.

Cleveland Heights (Warrensville post office), **Ohio**—Plans have been prepared for the construction of an apartment house at Euclid Heights Blvd. and Overlook Rd., for the Euclid Heights Investment Co., recently incorporated. Estimated cost, $50,000.

East Liverpool, Ohio—Bids will be received until noon Jan. 20, by William R. Scragg, Chn. Elks Bldg. Com., for the construction of the Elks Home on West Fifth St.

Fremont, Ohio—The Commissioners of Sandusky County contemplate the construction of a Court House, estimated to cost $400,000.

Hamilton, Ohio—The city plans the construction of a $200,000 city hall. F. A. Hinkel is Mayor.

Markle, Ohio—Bids will be received until Dec. 31, by G. J. Hellemen, Clk. Bd. of Education, for the construction of a school. Howard & Merriam, Columbus, are Archs.

Wilmington, Ohio—Plans have been prepared by Robertson & Fahnestock, Archs., Cincinnati, for the construction of a hotel, to cost about $100,000.

Youngstown, Ohio—Plans are being prepared by Frank H. Hale, Arch., Dollar Bank Bldg., for the construction of a $400,000 telephone exchange building for the Ohio State Telephone Co.

Zanesville, Ohio—The City Council, of Zanesville, plans the construction of city hall and market, to cost about, $52,000.

Chicago, Ill.—Plans are being prepared by Frederick Koening, Arch., 30 North Dearborn St., for the construction of a three-story and basement 107x120-ft. apartment house on 70th Pl. and Oglesby Ave. for Smith Boyll, 30 North Dearborn St. Estimated cost, $65,000.

Chicago, Ill.—L. M. Mitchell, Arch., 9 South La Salle St., is preparing plans for the construction of three apartments at 5014-27 St. Lawrence Ave., for Johnston Bros., 109 North Dearborn St. Estimated cost, $120,000.

Plans are being prepared by John E. Stone, Arch., 8 South Dearborn St., for the construction of a three-story brick apartment at 5447-57 Woodlawn Ave. Estimated cost, $40,000.

A permit for the construction of a three-story brick apartment at 2344-54 East 70th Pl. has been granted to Mrs. E. Hachel, 7302 Oglesby Ave. The estimated cost is $75,000. Thomas Bishop is Arch.

(Continued on page 387)

CONTRACT PRICE

QUAY WALL, PAWTUCKET, R. I.

+Bids were received Nov. 24, by the State Harbor Improvement Commission, for the construction of a quay wall at Pawtucket from (A) JOHN CASHMAN & SONS, Boston (awarded contract); (B) John Cashman & Sons, Boston (alternate bid); (C) Roy H. Beattie, Inc., Fall River; (D) H. P. Converse Co., Boston; (E) T. A. Scott Co., Inc., New London, Conn. The item bids were as follows:

	A	B	C	D	E
10,000 cu.yd. excavation, earth	$0.47	$0.47	$0.70	$0.60	$0.75
3880 cu.yd. excavation, rock	8.75	8.75	8.80	8.50	12.50
4780 cu.yd. granite wall	6.90	7.25	6.90	8.00	11.00
690 lin.ft. granite coping	9.70	8.70	10.50	11.30	12.00
15 lin.ft. granite coping	7.00	7.00	6.00	5.00	12.00
690 lin.ft. wooden fendering	9.50	5.50	8.00	7.00	9.00
11,000 lb. cast iron	0.04	0.04	0.04	0.04	0.04½
Extended totals	$85,425	$80,748	$87,421	$90,362	$123,745

SEWER, PORTLAND, ORE.

Bids were received by the City Council for the construction of a trunk sewer in East 82d St., from (A) Giebish & Joplin, (B) Consolidated Contract Co., (C) Elliott Contracting Co., (D) J. F. Shea, (E) James Kennedy. The item bids were as follows:

Vitrified clay pipe—	A	B	C	D	E
248 lin.ft. 24-in.	$2.00	$2.00	$2.00	$2.00	$1.85
266 lin.ft. 22-in.	1.70	1.60	1.50	1.60	1.65
306 lin.ft. 20-in.	1.40	1.30	1.30	1.35	1.50
130 lin.ft. 18-in.	1.20	1.20	1.20	1.10	1.10
134 lin.ft. 16-in.	1.00	1.10	0.90	0.85	0.85
218 lin.ft. 14-in.	0.75	1.00	0.75	0.75	0.75
138 lin.ft. 12-in.	0.60	0.60	0.50	0.50	0.55
68 in.ft. 10-in.	0.50	0.50	0.45	0.40	0.45
1996 lin.ft. 8-in.	0.35	0.35	0.30	0.30	0.35
6138 lin.ft. 6-in.	0.25	0.30	0.25	0.25	0.25
Reinforced-concrete pipe—					
4298 lin.ft. 60-in.	5.40	5.90	5.40	6.95	5.85
5151 lin.ft. 54-in., Class A	5.25	6.00	5.25	6.95	5.90
2466 lin.ft. 54-in., Class B	4.40	5.10	4.55	5.99	5.10
1686 lin.ft. 42-in.	3.50	3.80	3.20	4.08	3.60
43 lin.ft. 36-in., Class A	3.20	3.60	3.10	3.87	3.50
2315 lin.ft. 36-in., Class B	2.50	3.00	2.55	3.02	3.00
1617 lin.ft. 30-in.	2.30	2.50	1.90	2.12	2.30
87,497 cu.yd. earth excavation	0.86	0.73	0.78	0.70	0.80
Extended totals	$173,494	$174,459	$174,535	$175,269	$177,924

WATER SYSTEM, WAPPINGERS FALLS, N. Y.

+Bids were received by the Board of Trustees, Nov. 18, for the construction of a water system according to plans prepared by H. L. Sterling, Engr., Newburgh, from (A) Petrossi Bros. Hartford Conn.; (A-1) Michael Spino, Beacon, N. Y.; (B) H. J. Zevely, Morgantown, W. Va.; (B-1) Both & Weston, Long Island, N. Y.; (C) Daly & Merritt, Port Chester, N. Y.; (C-1) H. K. Corbin, New York, N. Y.; (D) J. F. Tusco, Newark, N. J.; (D-1) Gruner & Hollenbuek, Harriman, N. Y.; (E) Hanover Contracting Co., New York, N. Y.; (E-1) D. M. Rosser, Kingston, Penn.; (F) Barbara & D'Aurio Co., Waterbury, Conn.; (F-1) Langan Construction Corporation, Albany, N. Y.; (G) Joseph Johnson's Sons, 455 Broadway, W. New Brighton, N. Y.; (G-1) Eon Engineering & Contracting Co., Queens Plaza Court Bldg., Long Island, N. Y.; (H) Joseph L. Sigretto, Woodhaven, L. I.; (H-1) J. B. Pennell, Yonkers, N. Y.; (I) Samuel Boun, Syracuse, N. Y.; (J) R. B. Kennedy, Utica, N. Y.; (J-1) Thompson & Wooster, Walden, N. Y.; (K) Peekskill Construction Co., N. Y.; (K-1) O'Rourke Contracting Co., Yonkers, N. Y.; (L) Kellam & Shacer Co., Schenectady, N. Y.; (M) J. F. Leary & Co., Rochester, N. Y.; (M-1) Harrison & Burton Co., New York, N. Y.; (N) Samuel Beskin, Beacon, N. Y.; (N-1) Amanna & Sullivan, New York, N. Y.; (O) B. G. Coon Construction Co., Luzerne, Penn.; (O-1) Abner M. Harper, Newburgh, N. Y.; (P) Pratt, Reed & Philips, Schenectady, N. Y.; (P-1) F. A. Lewis, New York, N. Y.; (Q) Frank Puglia, Paterson, N. J.; (Q-1) L. M. Camarco, Lee, Mass.; (R) Burns & Lyons, New York, N. Y.; (R-1) William S. Mitchell, Bronx, N. Y.; (S) Young & Hyde, Inc., New York, N. Y.; (S-1) J. I. McDonald, Poughkeepsie, N. Y.; (T) Gardner & Von Cleave, Asbury Park, N. J.; (T-1) James McAvoy, New York, N. Y.; (U) CHRISTOPHER & LOCKWOOD, Peekskill, N. Y. (awarded contract); (V) Hope Engineering & Supply Co., Pittsburgh, Penn.; (W) Suburban Engineering Co., New York, N. Y. The item bids were as follows:

	A	A-1	B	B-1	C	C-1	D	D-1	E	E-1	F	F-1	G	G-1	H	H-1	I	J	J-1	K	K-1
42,840 lin.ft. trenching, Class A	$0.23	$0.25	$0.22	$0.16	$0.19	$0.18	$0.32	$0.19	$0.18	$0.20	$0.22	$1.25	$0.20	$0.01	$0.30	$0.24	$1.95	$0.23	$0.18	$0.20	$2.41
50 lin.ft. trenching, Class B	0.38	1.00	4.00	5.00	1.00	2.00	0.50	0.75	0.50	2.00	0.25	0.45	10.00	3.00	1.18	1.50	2.00	8.00	2.00	3.00	1.00
1000 cu.yd excavation, Class C	4.00	3.49	2.50	3.00	3.50	3.00	3.00	1.50	2.60	4.00	3.75	2.50	3.50	3.50	3.54	3.50	4.00	3.35	2.00	3.00	2.90
662 tons c.i. pipe	28.00	30.00	30.00	25.00	24.00	22.00	25.00	27.50	23.50	25.00	28.65	23.25	25.50	28.00	25.60	24.25	25.50	23.00	25.00	21.50	23.50
15 tons special iron castings	60.00	40.00	66.00	60.00	60.00	60.00	50.00	70.00	60.00	57.00	70.26	58.00	67.50	60.00	60.25	51.50	60.00	55.00	65.00	50.00	55.00
1 ton straight flanged pipe	50.00	38.00	40.00	40.00	80.00	50.00	50.00	50.00	40.60	50.00	42.35	38.00	50.00	60.00	60.23	31.50	70.00	40.00	80.00	40.00	40.00
8 ton valve boxes	65.00	60.00	70.00	55.00	60.00	55.00	50.00	60.00	55.00	60.00	52.05	73.00	65.00	60.00	54.30	37.70	48.00	55.00	65.00	52.00	60.00
38 4-in. valves	8.00	9.75	11.00	12.00	9.00	7.50	7.00	10.00	6.75	6.50	9.25	8.25	10.00	10.00	7.46	10.50	8.50	10.00	7.00	6.00	6.25
43 6-in. valves	12.50	14.25	18.00	17.00	14.00	12.00	10.00	15.00	11.00	9.75	14.70	11.50	15.00	15.00	11.00	15.17	13.00	13.00	12.00	9.00	9.05
5 8-in. valves	18.00	23.00	26.00	25.00	18.00	16.50	15.00	25.00	18.00	15.00	21.25	18.00	20.00	25.00	16.55	21.97	18.00	20.00	18.00	14.00	14.50
3 10-in. valves	26.00	34.00	40.00	35.00	30.00	23.50	25.00	35.00	25.00	23.00	29.50	28.00	30.00	40.00	25.30	30.00	27.00	30.00	25.00	22.00	25.00
300 ¾-in. corrugated cocks	4.00	1.00	2.50	2.00	1.00	2.50	1.00	1.00	2.00	1.35	1.08	1.25	4.50	2.00	2.36	2.85	6.50	4.50	1.50	1.00	2.50
10 ¾-in. corrugated cocks	4.25	1.50	2.75	3.00	2.00	2.50	1.20	1.50	2.00	1.50	1.49	1.50	6.50	4.00	2.36	2.90	8.50	6.00	1.70	2.00	2.50
10 1-in. corrugated cocks	4.40	2.15	3.00	5.00	3.00	3.00	1.50	2.00	3.00	2.00	3.10	2.00	10.00	5.00	2.36	3.00	12.00	7.00	1.70	4.00	3.00
40 hydrants, 2-nozzle	36.00	30.00	35.00	28.00	27.50	25.00	25.00	30.00	25.00	30.00	27.50	29.00	38.00	30.00	37.20	37.50	27.00	27.00	26.00	23.00	40.00
24 hydrants, 3-nozzle	50.00	42.00	40.00	40.00	45.00	50.00	40.00	35.00	30.00	45.00	32.03	41.90	50.00	50.00	57.25	51.50	20.50	35.00	30.00	26.00	55.00
15,415 lin.ft. 4-in. pipe	0.13	0.14	0.12	0.08	0.10	0.06	0.10	0.08	0.08	0.12	0.14	0.95	0.15	0.40	0.07	0.19	0.75	0.19	0.10	0.08	0.95
21,035 lin.ft. 6-in. pipe	0.15	0.16	0.15	0.11	0.12	0.09	0.13	0.12	0.10	0.15	0.17	0.11	0.20	0.41	0.12	0.21	0.95	0.24	0.12	0.10	0.12
2080 lin.ft. 8-in. pipe	0.20	0.20	0.18	0.14	0.19	0.12	0.15	0.15	0.13	0.22	0.22	1.35	0.25	0.42	0.20	0.27	0.16	0.25	0.15	0.15	0.16
4310 lin.ft. 10-in. pipe	0.25	0.24	0.20	0.17	0.55	0.17	0.17	0.22	0.16	0.25	0.32	0.17	0.30	0.43	0.22	0.30	2.35	0.30	0.18	0.20	0.26
26,000 cu.yd. excavation, reservoir	0.60	0.89	0.65	0.40	0.60	0.60	0.52	0.48	1.50	0.75	0.55	0.70	0.75	0.50	0.59	0.75	0.77	0.50	0.45	0.60	0.61
650 lin.ft. gutter	0.50	0.50	0.90	0.80	0.45	0.65	0.60	0.70	0.75	1.00	0.98	0.25	1.00	0.50	0.71	0.25	0.70	0.60	0.60	0.50	0.75
970 cu.yd. division wall	10.00	8.00	8.00	6.00	7.00	8.00	7.00	6.25	7.50	8.00	5.98	4.90	9.50	6.50	5.00	7.00	7.00	7.00	4.50	8.00	5.50
3700 sq.ft. core wall	0.40	0.15	0.16	0.07	0.20	0.10	0.50	1.00	0.25	0.20	0.18	0.09	0.60	0.40	0.17	0.15	0.10	0.20	0.12	0.20	0.15
1 manhole	75.00	175.00	100.00	50.00	90.00	45.00	100.00	50.00	50.00	100.00	75.00	75.00	65.00	59.00	59.00	150.00	60.00	40.00	40.00	60.00	100.00
11 cu.yd. concrete overflow	10.00	8.00	8.00	8.00	10.00	15.00	8.00	10.00	8.00	10.00	9.57	12.00	9.00	10.00	8.26	7.00	10.00	9.00	5.00	15.00	8.50
3324 sq.yd. gravel floor	1.00	0.60	0.40	0.35	0.25	0.33	0.75	0.50	0.50	0.40	0.42	0.33	0.45	0.40	0.40	0.50	0.50	0.35	0.15	0.35	0.45
Rock	4.00	5.00	2.50	3.00	3.50	3.50	3.00	1.50	5.00	4.00	2.25	3.00	3.00	7.50	1.77	3.00	5.00	2.00	3.00	3.00	3.50
Extended totals	$76,081	$79,984	$71,779	$55,083	$63,114	$60,315	$68,169	$62,629	$84,422	$70,863	$67,634	$57,863	$78,058	$68,541	$67,056	$74,014	$69,652	$66,676	$53,773	$60,136	$64,044

	L	M	M-1	N	N-1	O	O-1	P	P-1	Q	Q-1	R	R-1	S	S-1	T	T-1	U	V	W
42,840 lin.ft. trenching, Class A	$0.12	$0.29	$0.20	$0.18	$0.20	$0.21	$0.11	$0.30	$0.15	$0.15	$0.52	$0.16	$0.16	$0.17	$0.13	$0.20	$0.09	$0.20	$0.43	$0.225
50 lin.ft. trenching, Class B	0.50	0.29	3.00	1.00	1.00	0.80	1.00	1.50	1.00	1.00	0.80	1.50	5.03	4.00	0.50	1.00	0.001	0.80	2.82	3.50
1000 cu.yd. excavation, Class C	2.50	4.50	3.00	1.90	2.50	2.30	3.00	4.50	3.00	2.00	4.50	2.50	2.75	3.00	3.00	3.50	0.001	2.00	2.75	3.50
662 tons c.i. pipe	24.15	23.90	24.00	25.75	23.00	23.25	22.00	28.00	23.00	25.00	24.50	23.42	26.24	25.75	23.50	25.10	21.50	23.00	22.50	23.00
15 tons special iron castings	64.72	52.00	55.00	70.00	53.00	64.00	60.00	63.00	55.00	55.00	53.50	55.00	65.00	60.35	60.00	58.68	50.00	50.00	57.00	56.00
1 ton straight flanged pipe	26.83	35.00	60.00	50.00	38.00	60.00	40.00	100.00	50.00	45.00	38.50	55.00	50.00	44.75	40.00	28.50	35.00	35.00	31.20	45.00
8-ton valve boxes	45.00	34.40	40.00	70.00	53.00	50.00	60.00	80.00	50.00	55.00	53.50	54.00	62.50	61.00	75.00	66.82	50.00	50.00	52.50	51.50
38 4-in. valves	10.17	5.75	7.50	7.00	15.00	6.75	7.00	12.00	7.00	9.00	6.72	7.00	8.00	11.50	8.35	8.34	8.50	10.00	9.70	8.25
43 6-in. valves	14.88	9.80	11.50	10.00	20.00	11.00	10.50	20.00	10.50	14.00	9.78	10.00	11.25	15.25	11.53	13.40	12.00	13.50	15.00	14.00
5 8-in. valves	20.62	16.25	17.00	16.00	25.00	16.00	16.00	30.00	15.00	21.00	15.00	14.00	17.00	23.00	18.65	19.55	17.00	18.00	21.00	20.00
3 10-in valves	29.24	23.50	25.00	25.00	33.00	23.50	23.00	40.00	25.00	30.00	22.25	22.00	25.00	38.00	28.00	28.24	27.00	27.00	29.00	30.00
300 ¾-in. corrugated cocks	1.50	0.90	1.50	2.50	2.50	1.80	0.60	1.50	2.50	1.00	2.00	1.00	2.50	1.38	1.25	1.40	0.25	1.35	1.00	4.40
10 ¾-in. corrugated cocks	2.00	1.25	1.75	2.50	2.50	2.00	1.50	2.50	2.75	1.50	2.50	1.40	2.75	1.85	1.50	1.66	0.25	1.55	1.10	4.75
10 1-in. corrugated cocks	2.00	1.60	2.00	2.50	3.00	2.20	2.50	3.00	3.00	1.75	3.00	3.50	4.00	4.00	2.00	2.50	0.25	1.75	2.50	6.50
40 hydrants, 2-nozzle	27.82	22.50	26.50	30.00	41.00	27.50	24.00	35.00	25.75	30.00	27.00	28.00	32.00	33.35	29.80	35.00	29.00	29.00	30.50	30.00
24 hydrants, 3-nozzle	44.60	27.00	43.50	42.00	54.00	29.50	30.00	50.00	40.00	46.00	40.00	34.00	46.00	52.60	42.00	37.00	41.00	41.00	35.75	50.00
15,415 lin.ft. 4-in. pipe	0.11	0.10	0.10	0.10	0.10	0.08	0.16	0.08	0.10	0.12	0.45	0.10	0.08	0.14	0.10	0.06	0.42	0.11	0.075	0.11
21,035 lin.ft. 6-in. pipe	0.12	0.12	0.12	0.13	0.16	0.09	0.18	0.10	0.12	0.15	0.50	0.15	0.095	0.17	0.11	0.08	0.42	0.15	0.085	0.13
2080 lin.ft. 8-in. pipe	1.35	0.15	0.14	0.16	0.20	0.12	0.20	0.12	0.14	0.22	0.70	0.17	0.11	0.19	0.14	0.115	0.42	0.20	0.11	0.15
4310 lin.ft. 10-in. pipe	1.65	0.20	0.17	0.20	0.20	0.15	0.22	0.14	0.15	0.25	0.80	0.20	0.125	0.23	0.17	0.145	0.42	0.25	0.145	0.19
26,000 cu.yd. excavation, reservoir	0.43	0.44	0.38	0.45	0.60	0.63	0.49	1.10	0.47	0.60	0.65	0.60	0.57	0.45	0.725	0.75	0.33	0.35	0.80	0.60
650 lin.ft. gutter	0.65	0.66	0.80	0.60	6.00	0.60	0.30	0.35	0.54	0.45	0.75	1.00	0.64	0.69	0.25	0.90	0.97	1.00	1.40	0.68
970 cu.yd. division wall	7.00	7.50	5.95	5.00	2.00	7.00	3.50	8.00	9.00	6.00	8.50	5.15	8.43	7.35	5.00	7.10	4.00	4.53	9.00	7.35
3700 sq.ft. core wall	0.12	0.08	0.15	0.75	0.15	0.30	0.15	0.20	2.25	0.25	0.45	0.20	0.27	0.12	0.095	0.10	0.80	0.10	1.70	0.16
1 manhole	75.00	60.00	50.00	50.00	100.00	150.00	50.00	150.00	100.00	40.00	25.00	75.00	95.00	57.00	50.00	73.00	65.00	64.00	200.00	80.00
11 cu.yd. concrete overflow	9.00	7.50	8.00	8.00	7.00	7.00	10.00	12.00	9.00	7.00	16.00	10.00	7.00	7.50	12.00	7.25	4.00	6.00	10.00	8.00
3324 cu.yd. gravel floor	0.15	0.30	0.25	0.25	0.35	0.40	0.10	0.40	0.47	0.50	0.35	0.50	0.28	0.33	0.35	0.25	0.50	0.20	0.42	0.35
Rock	2.95	4.50	3.00	1.00	3.00	2.50	3.00	3.50	1.50	4.00	2.00	3.00	3.50	3.00	3.00	3.00	1.50	1.50	2.75	3.50
Extended totals	$53,632	$62,308	$55,127	$58,382	$62,516	$61,998	$51,507	$85,468	$58,540	$61,068	$98,838	$59,207	$62,737	$61,437	$59,730	$65,800	$58,323	$52,386	$84,224	$65,484

PIER, NEW BEDFORD, MASS.

Bids were received Dec. 12 by the State Harbor and Land Commissioners for the construction of a pier and steel shed from (A) John R. Burke; (B) W. H. Ellis & Son Co.; (C) Woodbury & Leighton Co.; (D) Coleman Bros.; (E) John Cashman & Sons Co.; (F) T. A. Scott Co., Inc.; (G) H. P. Converse & Co.; (H) Snare & Triest Co.; (I) E. W. Foley Contracting Co., Inc.; (J) Hansom Construction Co.; (K) Lawlor Bros. The item bids were as follows:

ALTERNATE CONSTRUCTION

	A	B	C	D	E	F	G	H	I	J	K
30,000 cu.yd. dredging and excavating	$0.25	$0.34	$0.30	$0.34	$0.25	$0.31	$0.397	$0.33	$0.49	$0.35	$0.40
100 cu.yd. excavating boulders, 1 to 5 tons	7.50	11.50	6.00	6.00	10.00	10.00	9.20	10.00	10.00	10.00	15.00
100 cu.yd. excavating boulders, over 5 tons	5.00	26.00	6.00	13.00	25.00	25.00	17.00	25.00	20.00	20.00	30.00
25,000 cu.yd. filling	0.49	0.80	0.33	0.60	0.70	0.70	0.825	0.63	0.50	0.48	1.00
10,000 lin.ft. oak fender piles	0.50	0.41	0.40	0.41	0.55	0.35	0.40	0.40	0.50	0.36	0.60
8050 lin.ft. y.p. or oak piles (in curtain)	0.42	0.21	0.35	0.30	0.30	0.28	0.40	0.32	0.40	0.29	0.40
46,500 lin.ft. spruce piles	0.32	0.23	0.25	0.23	0.23	0.22	0.23	0.26	0.35	0.25	0.32
130 M b.m. creosoted sheet piling	65.00	63.00	87.00	80.00	75.00	90.00	74.00	75.00	70.00	80.00	75.00
95 M b.m. y.p. timber (caps, wales and stringers)	50.00	46.00	51.00	45.00	50.00	53.00	52.50	60.00	90.00	46.00	60.00
85 M b.m. spruce or y.p. (in deck)	45.00	43.00	46.00	40.00	46.00	42.50	40.00	52.00	60.00	40.00	45.00
10 M b.m. coated y.p. guard timbers	55.00	50.00	60.00	50.00	68.00	74.50	67.00	65.00	80.00	57.75	75.00
22,000 lb. reinforcing steel (in foundations)	0.025	0.02½	0.05	0.025	0.04	0.025	0.0225	0.04	0.03	0.03	0.04
3700 cu.yd. concrete in curtain walls	8.00	5.90	9.50	10.00	11.00	14.00	9.00	10.00	8.00	12.00	15.00
800 lin.ft. concrete chocks	2.50	0.98	4.00	2.50	2.50	2.50	2.00	3.00	3.50	3.00	2.00
1250 cu.yd. concrete and granite wall	7.50	9.00	9.50	9.00	9.00	8.80	10.00	12.00	9.00	10.00	15.00
34,000 lb. c.i. moorings, anchor posts, etc	0.04	0.03	0.03	0.03	0.04	0.035	0.03	0.03	0.03	0.0525	0.05
300 cu.yd. concrete in foundations	7.50	6.50	8.10	8.00	8.50	10.00	9.50	8.00	7.50	12.00	8.00
50,000 lb. tie rods and turn buckles	0.035	0.05	0.10	0.05	0.06	0.05	0.057	0.06	0.05	0.04	0.05
Moving immigration shed (lump sum)	650.00	3800.00	1300.00	1300.00	1500.00	750.00	1250.00	1200.00	1000.00	1100.00	1000.00
Extension of sewer (lump sum)	210.00	950.00	400.00	400.00	292.50	300.00	395.00	500.00	1000.00	300.00	500.00
2,380,000 lb. structural steel	0.025	0.025	0.024	0.03	0.0225	0.025	0.0265	0.027	0.0325	0.029	0.035
1027 cu.yd. reinforced concrete in slabs—1st floor	16.00	11.80	15.50	13.00	16.00	17.40	17.10	16.50	18.00	18.70	13.50
833 cu.yd. reinforced concrete in slabs—2nd floor	16.00	11.80	20.00	13.00	16.00	21.50	21.00	18.00	18.00	17.00	13.50
21,500 sq.ft. reinforced concrete outside walls and partitions	0.26	0.30	0.27	0.27	0.26	0.30	0.26	0.30	0.25	0.31	0.40
102 sliding doors—1st floor	60.00	68.00	65.00	60.00	65.00	76.00	67.00	70.00	25.00	60.00	75.00
18 pair swinging doors—2nd floor	115.00	125.00	95.00	80.00	120.00	100.00	78.50	90.00	50.00	114.00	125.00
6 paneled doors	8.00	20.00	30.00	30.00	25.00	38.00	24.00	30.00	25.00	48.00	75.00
4 fire doors—2nd floor partitions	50.00	65.00	50.00	60.00	55.00	60.00	72.00	60.00	40.00	18.00	75.00
4360 sq.ft. steel sash	0.58	0.54	0.55	0.50	0.40	0.753	0.52	0.60	0.15	0.58	0.59
2 flags and flag poles (lump sum)	150.00	125.00	100.00	200.00	0.01	200.00	154.00	80.00	100.00	300.00	150.00
11,000 lb. metal stairway	0.05	0.09	0.06	0.07	0.08	0.095	0.07	0.05	0.07	0.08	0.165
5300 sq.yd. granite paving on concrete base	3.25	3.50	3.90	3.00	2.90	3.40	3.30	3.00	3.50	3.18	3.85
23,000 lin.ft. y.p. short length spruce piles	0.42	0.21	0.65	0.50	0.40	0.50	0.32	0.42	0.60	0.50	0.40
3900 cu.yd. concrete (in foundation piers)	10.00	7.50	16.00	11.00	9.90	16.00	21.00	13.00	15.00	18.00	18.00
2500 lb. anchor bolts and frames	0.04	0.04	0.10	0.07	0.06	0.05	0.035	0.05	0.05	0.06	0.05
Rip-rap around concrete piers	1.70	1.50	3.00	1.40	1.60	1.25	1.50	1.50	2.50	2.00	1.50
6210 lin.ft. oak spur shores	0.50	0.40	0.45	0.45	0.55	0.34	0.39	0.42	0.75	0.34	0.60
15.6 M b.m. y.p. timber (wales and chocks)	65.00	62.00	65.00	60.00	72.00	75.00	78.00	80.00	80.00	70.00	85.00
2040 cu.yd. reinforced concrete (driveway and pier deck)	16.00	12.50	14.00	10.50	16.00	11.50	13.00	16.50	18.00	18.70	15.00
900 lin.ft. laying railroad tracks, etc	10.00	3.10	0.50	2.50	2.25	5.00	2.31	2.00	3.00	2.50	3.00
2700 sq.yd. granite block paving (driveway and outer end of pier)	3.50	3.50	3.35	2.40	2.20	2.65	2.45	2.40	3.50	2.58	3.85
328.5 "squares" of 100 sq.ft. plank roof, etc	50.00	20.00	25.00	20.00	21.50	24.00	25.65	24.00	30.00	25.25	30.00
5300 sq.yd. vitreous shale paving block (on concrete base)	3.50	2.94	3.40	3.25	2.70	2.70	2.90	2.80	3.50	2.80	4.00
5300 sq.yd. creosoted wood block (on concrete base)	3.50	3.50	3.50	3.25	3.50	3.64	3.15	3.30	3.50	2.80	4.00
312 cu.yd. granite masonry (in concrete piers)	10.00	15.00	22.00	25.00	16.50	17.50	21.00	24.00	30.00	20.00	26.00
Extended totals	$361,217	$323,437	$383,760	$354,945	$353,453	$404,369	$409,619	$387,242	$422,519	$419,910	$473,184

SOLID FILL CONSTRUCTION

	A	B	C	D	E	F	G	H	I	J	K
60,000 cu.yd. dredging and excavating	$0.25	$0.34	$0.30	$0.34	$0.25	$0.31	$0.397	$0.33	$0.49	$0.35	$0.40
100 cu.yd. excavating boulders, 1 to 5 tons	7.50	11.50	6.00	6.00	10.00	10.00	9.20	10.00	10.00	10.00	15.00
100 cu.yd. excavating boulders, over 5 tons	5.00	26.00	6.00	13.00	25.00	25.00	17.00	25.00	20.00	20.00	30.00
75,000 cu.yd. filling	0.49	0.80	0.33	0.60	0.70	0.68	0.615	0.63	0.50	0.48	1.00
10,000 lin.ft. oak fender piles	0.50	0.41	0.40	0.41	0.55	0.35	0.40	0.40	0.50	0.36	0.60
14,000 lin.ft. y.p. or oak piles (in curtain)	0.42	0.21	0.35	0.30	0.30	0.28	0.40	0.32	0.40	0.29	0.40
91,500 lin.ft. spruce piles	0.32	0.23	0.25	0.23	0.23	0.22	0.23	0.27	0.35	0.25	0.32
230 M b.m. creosoted sheet piling	65.00	63.00	87.00	80.00	75.00	90.00	74.00	75.00	70.00	80.00	75.00
160 M b.m. y.p. timber (caps, wales and stringers)	50.00	46.00	51.00	45.00	50.00	53.00	52.50	60.00	90.00	46.00	60.00
150 M b.m. spruce or y.p. (in deck)	45.00	43.00	46.00	40.00	46.00	42.50	40.00	52.00	60.00	40.00	45.00
10 M b.m. coated y.p. guard timbers	55.00	50.00	60.00	50.00	68.00	74.50	67.00	65.00	80.00	57.75	75.00
40,000 lb. reinforcing steel (in foundations)	0.025	0.02½	0.05	0.025	0.04	0.025	0.0225	0.04	0.03	0.03	0.04
6000 cu.yd. concrete in curtain walls	8.00	5.90	9.50	10.00	11.00	14.00	9.00	10.00	8.00	12.00	15.00
1565 lin.ft. concrete chocks	2.50	0.98	4.00	2.50	2.50	2.50	2.00	3.00	3.50	3.00	2.00
2275 cu.yd. concrete and granite wall	7.50	9.00	9.50	9.00	9.00	8.80	10.00	12.00	9.00	10.00	15.00
34,000 lb. c.i. moorings, anchor posts, etc	0.04	0.03	0.03	0.03	0.04	0.035	0.03	0.03	0.03	0.0525	0.05
450 cu.yd. concrete in foundations	7.50	6.50	8.10	8.00	8.50	10.00	9.50	8.00	7.50	12.00	8.00
50,000 lb. tie rods and turnbuckles	0.035	0.05	0.10	0.05	0.06	0.05	0.057	0.06	0.05	0.04	0.05
Moving immigration shed (lump sum)	650.00	3800.00	1300.00	1300.00	1500.00	750.00	1250.00	1200.00	1000.00	1100.00	1000.00
900 lin.ft. laying railroad tracks, etc	3.25	3.10	2.00	2.25	2.25	5.00	2.76	2.00	3.00	2.50	3.00
Extension of sewer (lump sum)	210.00	950.00	400.00	400.00	292.50	300.00	395.00	500.00	1000.00	300.00	500.00
2,000,000 lb. structural steel	0.025	0.025	0.024	0.03	0.0225	0.025	0.0265	0.027	0.0325	0.029	0.035
1027 cu.yd. reinforced concrete in slabs—1st floor	16.00	11.80	15.50	13.00	16.00	17.40	17.10	16.50	18.00	18.70	13.50
833 cu.yd. reinforced concrete in slabs—2nd floor	16.00	11.80	20.00	13.00	16.00	21.50	21.00	18.00	18.00	17.00	13.50
21,500 sq.ft. reinforced concrete outside walls and partitions	0.26	0.30	0.27	0.27	0.26	0.30	0.26	0.30	0.25	0.31	0.40
102 sliding doors—1st floor	60.00	68.00	65.00	60.00	65.00	76.00	67.00	70.00	25.00	60.00	75.00
18 pair swing doors—2nd floor	115.00	125.00	95.00	80.00	120.00	100.00	78.50	90.00	50.00	114.00	125.00
6 paneled doors	8.00	20.00	30.00	30.00	25.00	38.00	24.00	30.00	25.00	48.00	75.00
4 fire doors—2nd floor partitions	50.00	65.00	50.00	60.00	55.00	60.00	72.00	60.00	40.00	18.00	75.00
4360 sq.ft. steel sash	0.58	0.54	0.55	0.50	0.40	0.753	0.52	0.60	0.15	0.58	0.59
328.5 "squares" 100 sq.ft. reinforced concrete roof	30.00	35.00	33.00	25.00	32.00	33.50	32.00	34.00	35.00	52.62	25.00
2 flags and flagpoles (lump sum)	150.00	125.00	100.00	200.00	0.01	200.00	154.00	80.00	100.00	300.00	150.00
11,000 lb. metal stairways	0.05	0.09	0.06	0.07	0.08	0.095	0.07	0.05	0.07	0.08	0.165
9000 sq.yd. granite paving on concrete base	3.25	3.50	3.90	3.00	2.90	3.40	3.30	3.00	3.50	3.18	3.85
9000 sq.yd. vitreous shale paving block on concrete base	3.50	2.94	3.40	3.25	2.70	2.70	2.90	2.80	3.50	2.80	4.00
9000 sq.yd. creosoted wood block on concrete base	3.50	3.50	3.50	3.25	3.50	3.64	3.15	3.30	3.50	2.80	4.00
Extended totals	$339,777	$347,910	$355,634	$361,305	$367,311	$408,005	$374,081	$386,734	$392,209	$392,530	$481,345

CATALOG NOTICES

Asbestos Protected Metal Co., Beaver Falls, Penn. Bulletin No. 54. Asbestosteel for roofs and walls. Illustrated, 32 pp., 8x10½ in.

Stow Mfg. Co., Binghamton, N. Y. Bulletin No. 400. Portable drills, grinders, etc. Illustrated.

Lackawanna Steel Co., Lackawanna, N. Y. Bulletin. "The Lackawanna Deseaming Process for Rail Sections." Illustrated, 8½x10½ in.

The John F. Byers Machine Co., Ravenna, O. Catalog No. 21. Hoisting equipment for contractors and builders. Illustrated, 68 pp., 9x12 in.

The Cable Excavator Co., Commercial Trust Building Philadelphia, Penn. Catalog. Hadsel slack cable excavators, etc. Illustrated, 38 pp., 7x10 in.

Blaw Steel Construction Co., Pittsburgh, Penn. Bulletin No. 63. Blaw forms for concrete floors. Illustrated, 24 pp., 6x9 in.

The Paragon Machine Co., 77 South Ave., Rochester, N. Y. Catalog. Blue printing machinery. Illustrated, 12 pp., 6x9 in.

Builders Iron Foundry, Providence, R. I. Bulletin No. 84. The Venturi meter for gravity mains, pump discharge lines, sewage disposal systems, etc. Illustrated, 36 pp., 6x9 in. Bulletin No. 85. Venturi hot water meter for boiler feed, etc. Illustrated, 20 pp., 6x9 in.

B. K. Elliott Co., 126 Federal St., Pittsburgh, Penn. Catalog. Drawing materials and surveying instruments. Illustrated, 440 pp., 6x9 in.

Enfield Pottery and Tile Works, Enfield, Penn. Catalog. Plain and design tiles, plaques, panels and garden pottery. Illustrated, 12 pp., 9x12 in.

BUILDINGS

(Continued from page 384

East St. Louis, Ill.—The Maher Commission Co., East St. Louis, has purchased a site at Sixth St. and Missouri Ave., for the construction of an office building. Construction will begin in the spring.

Galesburg, Ill.—Veritas Lodge No. 478 and the First Scandinavian Lodge No. 446, I. O. O. F. will construct a four-story building, estimated to cost, $70,000.

Ottawa, Ill.—Plans have been prepared by Jason F. Richardson, Jr., Arch., for the construction of three fireproof buildings. The group will be known as the Illinois Valley General Hospital. The estimated cost is $75,000.

Springfield, Ill.—The Illinois Centennial Commission will petition the next legislature to appropriate $1,000,000 for the construction of a state building. Hugh S. Magill, Jr., Springfield, is Chn. of Comn.

Madison, Wis.—Bids will be received until 2:30 p.m., Jan. 18, by M. E. McCaffrey, Secy., University of Wisconsin, Administration Bldg., for constructing the superstructure of the addition to the Soils Bldg.

St. Paul, Minn.—The St. Paul Union Depot Co., are having plans prepared for the construction of the $15,000,000 St. Paul Union Depot. E. Pennington, Minneapolis, is Pres.

The St. Paul Athletic Club is planning to construct a $500,000 club house.

Parsons, Kan.—The contract for the construction of a three-story office building for the Missouri, Kansas & Texas Ry. has been awarded to the WIMMER CONTRACTING CO., St. Louis, Mo. Estimated cost, $50,000.

Kansas City, Mo.—Plans are being prepared for the construction of an addition, as a home for nurses for the German Hospital Association. Estimated cost, $60,000.

Oakland, Mo.—The Ursuline Sisters are planning the construction of a $125,000 seminary for young women, on a site recently purchased.

Temple, Tex.—Bids will soon be received by the Board of Directors of the Atcheson, Topeka & Santa Fé Ry. Employees Hospital, for the construction of a $50,000 addition, at Temple. Noted Aug. 6.

Denver, Colo.—The citizens of Denver are projecting a movement to raise $1,000,000 for the construction of a granite castle and development of the 640 acres of land on Mount Falcon, 15 miles west of Denver. The castle is to be the summer home for the use of the President of the United States. It will be built and presented to the nation by the citizens of the 22 states west of the Mississippi River.

Tacoma, Wash.—The Fry Bruhn Co., 1120 C. St. plans to expend $50,000 on improvements to its building.

Portland, Ore.—Bids will be received about Jan. 1, by McNaughton & Raymond, Archs., for the construction of the five-story, 100x200-ft. Blake-McFall Bldg., on East Ankeny between East Second and East Third St. Estimated cost, $90,000.

Portland, Ore.—Frye & Co., Seattle, Wash., contemplates the construction of a four-story, 50x100-ft. building on Third and Yamhill St. The estimated cost is $75,000.

Portland, Ore.—The School Board contemplates constructing the first unit of the Franklin High School at East 52d and Division St. Estimated cost, $100,000.

F. A. Naramore, Arch., is preparing plans for the construction of the $40,000 Kennedy School on Jessup St.

Salem, Ore.—The State Fair Board will petition the next legislature to agree to the expenditure of $123,638 for the construction of a 159x270-ft., livestock exhibition building.

Los Angeles, Calif.—Plans have been prepared for the construction of a 100x195-ft. building on Central Ave. and Fourth St. for Wells, Fargo & Co. Estimated cost, $100,000.

The Owensmouth Union High School District voted $100,000 in bonds for the construction of a high school.

FILTRATION PLANT, CLEVELAND, OHIO

Bids were received Dec. 8 by the city for the construction of a filtration plant at the Division Pumping Station, from (A) M. L. Bayard, Philadelphia, Penn.; (B) American Water Softener Co., Philadelphia, Penn.; (C) Roberts Filter Mfg. Co., Darby, Penn.; (D) Norwood Engineering Co., Florence, Mass.; (E) Pittsburgh Filter Mfg. Co., Pittsburgh, Penn.; (F) William A. Pope, Chicago, Ill. The item bids were as follows:

	A	B	C	D	E	F
Filter strainer systems (lump sum)	$53,000.00	$50,441.00	$56,738.00	$54,600.00	$55,639.00	$65,992.00
Filter rate controllers (lump sum)	35,000.00	36,916.00	33,084.00	34,200.00	35,295.00	39,325.00
Sample pumps and piping (lump sum)	900.00	1325.00	1229.00	1500.00	1103.00	2640.00
Sand piping and equipment (lump sum)	4000.00	3983.00	3234.00	6500.00	4018.00	6740.00
Water level indicators and recorders (lump sum)	1000.00	1450.00	1101.00	1052.00	1171.00	830.00
Laboratory equipment (lump sum)	1700.00	1834.00	2652.00	2546.00	2226.00	2710.00
Sterilizing apparatus and piping (lump sum)	3600.00	4440.00	3810.00	3878.00	4273.00	4250.00
Automatic scales (lump sum)	6900.00	7312.00	7531.00	6035.00	6464.00	6100.00
Scale supports, platforms, spouts and gates (lump sum)	3300.00	2728.00	3437.00	2700.00	2658.00	5570.00
Lime slaking apparatus (lump sum)	3600.00	3690.00	3780.00	3600.00	4400.00	5090.00
Coagulant dissolving tanks (lump sum)	300.00	474.00	493.00	760.00	631.66	1240.00
Chemical pumps and stirrers (lump sum)	2400.00	1564.00	1701.00	2600.00	2250.00	3500.00
Coagulant feed device (lump sum)	1800.00	500.00	1089.00	1210.00	1089.00	1950.00
Lime and coagulant piping (lump sum)	6900.00	8891.00	5462.00	5900.00	6530.00	9940.00
Solution tank gages and alarms (lump sum)	700.00	750.00	838.00	848.00	946.00	866.00
Recording thermometers (lump sum)	300.00	304.00	328.00	385.00	345.00	480.00
Blower and ducts (lump sum)	800.00	1204.00	889.00	1093.00	859.00	1300.00
Water heaters (lump sum)	1200.00	1529.00	1589.00	1596.00	1631.00	2370.00
Hot water tanks and piping (lump sum)	700.00	607.00	722.00	767.00	704.00	960.00
Sludge car (lump sum)	100.00	54.00	69.00	50.00	78.00	102.00
Coagulant feed indicators and wiring (lump sum)	300.00	408.00	408.00	420.00	400.00	420.00
Coagulant disintegrators (lump sum)	1100.00	1320.00	1130.00	1340.00	1516.00	1540.00
Constant head tank (lump sum)	200.00	216.00	282.00	176.00	175.00	336.00
Sump pumps (lump sum)	700.00	890.00	781.00	973.00	865.00	1070.00
Switch boards, conduits and wiring (lump sum)	1500.00	1023.00	1122.00	956.00	1031.00	1528.00
Miscellaneous piping (lump sum)	800.00	609.00	630.00	1440.00	1016.00	3781.00
Baffles (lump sum)	900.00	858.00	1405.00	1090.00	1300.00	1462.00
Excavation and backfilling	400.00	300.00	360.00	300.00	240.00	800.00
Setting venturi meter recorders (lump sum)	300.00	309.00	310.00	342.00	365.00	1490.00
Totals	$133,500	$135,938	$136,204	$138,857	$139,218	$174,402

WATER TUNNEL LINING, BALTIMORE, MD.

Bids were received Dec. 2 for the construction of a concrete lining in the tunnel of the Gunpowder Water Supply Improvement District, from (A) C. B. Clark & Co., Baltimore; (B) James F. Leary Construction Co., Rochester, N. Y.; (C) Stobaugh Contracting Co., New York, N. Y.; (D) James Ferry & Sons, Baltimore; (E) Lock Joint Pipe Co., New York, N. Y.; (F) F. K. Corbin Co., New York, N. Y.; (G) Mason-Hilton & Co., New York, N. Y. The item bids were as follows:

	A	B	C	D	E	F	G
285 cu.yd. excavation for vault and steel sections	$4.00	$6.00	$5.00	$6.50	$6.00	$5.00	$3.00
22½ tons furnishing and placing steel bends, etc	130.00	200.00	170.00	220.00	.....	240.00	110.00
Placing 60-in. valve	50.00	200.00	300.00	700.00	200.00	800.00	75.00
325 cu.yd. 1:2:4 concrete in vault and around pipe	7.75	10.00	10.00	9.50	10.00	11.00	10.00
24 cu.ft. furnishing and placing 3-in. vault drain	1.20	1.15	1.50	0.50	1.00	1.00	1.00
3387 lb. furnishing and placing reinforcing steel, etc	0.03	0.08	0.05	0.10	0.05	0.04	0.05
1502 sq.ft. gunite lining in steel specials	0.50	0.30	0.40	0.50	0.12	1.00	0.60
1502 sq.ft. bitumastic lining steel specials	0.15	0.30	0.20	0.20	0.11	0.15	0.10
150 lin.ft. furnishing and placing 1-in. pipe for subdrain	0.90	0.30	1.30	0.50	.....	.....	1.50
20 lin.ft. furnishing and placing 1½-in. pipe for subdrain	1.20	0.35	1.40	0.65	.....	.....	2.00
100 lin.ft. furnishing and placing 3-in. pipe for subdrain	1.90	0.60	1.60	1.00	.....	.....	3.00
50 lin.ft. furnishing and placing 4-in. pipe for subdrain	2.40	0.85	2.00	1.50	.....	.....	4.00
50 lin.ft. furnishing and placing 6-in. pipe for subdrain	3.00	1.10	2.20	1.80	.....	.....	6.00
200 lin.ft. furnishing and placing 2-in. pipe subdrain	0.40	0.55	1.50	0.90	.....	.....	2.50
500 lin.ft. furnishing and placing 8-in. pipe subdrain	2.00	1.80	3.00	2.50	.....	.....	7.00
100 lin.ft. furnishing and placing 10-in. pipe subdrain	2.50	2.70	3.75	3.00	.....	.....	8.60
390 lin.ft. furnishing and placing 12-in. pipe subdrain	3.10	4.00	5.50	3.80	.....	.....	11.00
520 lin.ft. furnishing and placing 16-in. pipe subdrain	4.90	5.60	7.00	4.50	.....	.....	17.00
Furnishing and placing 8-in. x 8-in. x 3-in. to 4-in. c.i. tees	18.00	16.00	22.00	6.50	.....	.....	25.00
Furnishing and placing 10-in. x 10-in. x 4-in. to 6-in. c.i. tees	25.00	24.00	30.00	9.50	.....	.....	30.00
Furnishing and placing 12-in. x 12-in. x 4-in. to 6-in. c.i. tees	31.00	30.00	38.00	12.00	.....	.....	40.00
Furnishing and placing 16-in. x 16-in. x 4-in. to 6-in. c.i. tees	45.00	45.00	68.00	25.00	.....	.....	60.00
Furnishing and placing 1-8-in. and 1-12-in. valve	75.00	80.00	200.00	65.00	.....	.....	250.00
1730 lin.ft. (A) alternate drainage system	.....	.....	.....	2.00	0.10	0.50	3.50
60 lin.ft. lining shafts	31.00	50.00	100.00	50.00	60.00	40.00	40.00
2000 lin.ft. reinforced concrete lining	26.00	29.00	29.00	34.50	.....	.....	32.00
2000 lin.ft. (A) alternate reinforced pipe	.....	.....	.....	.....	39.00	50.00	.....
335 sq.yd. repairing roadway (macadam)	0.50	1.00	1.25	2.00	2.00	1.00	1.26
500 hr. reimbursement for delays	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Extended totals	$67,417	$98,400	$83,135	$90,434	$115,685	$92,462	$93,767

PART OF PISHKUN RESERVOIR SUPPLY CANAL

Sun River Project, Montana

Bids were received by the U. S. Reclamation Service, Dec. 8, at Great Falls, Mont., for constructing the Pishkun Reservoir Supply Canal, Sun River Project, from Station 8 + 60 to Station 38 + 53, from (A) Bates & Rodgers Construction Co., Spokane, Wash.; (B) Security Bridge Co., Billings, Mont.; (C) McArthur Bros. Co., 208 South La Salle St., Chicago, Ill.; (D) O'Connor & Helean, Great Falls, Mont. The item bids were as follows:

	A	B	C	D
49,000 cu.yd. excavation, Class 1	$0.20	$0.19	$0.33	$0.43
11,000 cu.yd. excavation, Class 2	0.45	0.47	0.45	0.55
8500 cu.yd. excavation, Class 3	0.87	1.25	0.90	1.00
15,000 sta. cu.yd. overhaul	0.02	0.02	0.02	0.02
1600 cu.yd. concrete in conduit, spillway, etc.	8.40	8.85	11.00	12.00
20 cu.yd. concrete in bridge piers	8.40	8.85	9.00	12.00
245,000 lb. placing reinforcing steel	0.01¼	0.01	0.011	0.01¼
1000 lin.ft. placing logs in tim crib	0.18	0.15	0.20	0.10
28,000 ft. b.m. erecting lumber in structures	13.00	14.00	20.00	15.00
80 cu.yd. filling timber crib	2.00	1.50	0.60	1.25
150 sq.yd. dry paving	0.80	1.50	2.00	1.75
Extended totals	$39,939	$43,936	$50,653	$59,305

"Engineering News" Representative in South America

The high altitudes and lack of oxygen at some of the mines in South America have long been noted as being a stumbling block to American engineers. The representative of "Engineering News," Duncan N. Hood, who went to South America as a trade scout in September, was overcome, notwithstanding he has had considerable experience in high altitudes. His letter, mailed from Lima, Peru, the last of October, describes his troubles, which should be read with care by those American engineers who contemplate going to that part of the world.

I arrived here Sunday morning from Cerro de Pasco. I would have written sooner, but was not in such physical condition that my brain could work right.

Before going to Cerro de Pasco, I was warned to beware of "El Soroche," a sickness caused by a sudden change to high altitudes in the Andes. I took all the known precautions to avoid it, took two days to make the trip, and dieted, etc., but I got it, and I am frank to say, it has all other sicknesses that I have experienced, backed off the boards. The only persons exempt from it are consumptives and those who have weak lungs. Not being in that class, I got an especially strong attack.

I have lived years in altitudes of 10,000 ft., above sea level, and thought I would have no trouble.

I am informed, however, that in the Andes, at similar altitudes, that the percentage of oxygen in the air is much less than in other parts of the world and this accounts for "El Soroche."

Briefly, it consists of a terrific headache, a violent cough with each full breath one takes, similar pains to "la grippe," all the nerves of the teeth become sensitive, the pulse rises to 120 and stays there day and night. Sleep is out of the question, and one sits up in bed to lessen the coughing. Sudden chills and fevers chase each other in and out of your body. There is no cure for it, it either wears off, or continues and then one must return immediately to a lower altitude, or death results.

At the end of my fourth day, the Doctor told me I would have to return immediately to Lima, failing which he declined to be responsible for the result. Four employees of the Cerro de Pasco Co. died from it as a result of refusing to return. So I came back.

RAILWAY PROSPECTS APPEAR BRIGHTER

L. J. Spence, director of traffic, who has returned from a month's inspection trip over the Southern Pacific lines in Louisiana, Texas, New Mexico, Arizona, California and Nevada, is quoted as follows:

"In Louisiana a good rice crop has been harvested and warehouses are filled with sugar. Texas produces a large cotton crop, but the European war has so curtailed the market and reduced the price that the business of the State has been unfavorably affected. In New Mexico, Arizona and Nevada the mining industry has been crippled by the war, so that some of the mines have been closed down, while others are turning out about 50% of their usual output. The most serious effect of these conditions is reflected in the diminished purchases of all classes of merchandise by merchants and consumers and a remarkable decrease in railroad travel. Although California has produced bountiful crops there has been comparatively little new construction or new projects of any character and an enormous shrinkage in travel, especially local travel, which is chiefly attributable to the wave of economy throughout the country that has been inspired by the prevalent feeling of uncertainty about the future of business. The earnings of the transcontinental lines have been further affected by the competition of the Panama Canal, which, of course, has not created new business but has transferred tonnage from the railroads.

"I am of the opinion that decreases in earnings have reached the limit and that after the beginning of the New Year we shall experience a gradual improvement, but this will largely depend upon the attitude of the Government.

"There are two methods by which the railroads can be assisted. First, by being allowed to advance their rates where competitive conditions will permit them to do so, and secondly, by being permitted to make necessary rates to retain their traffic against unregulated competition of steamship lines, without being required to reduce rates on other traffic that is not subject to the same competition, so long as other rates are no more than just and reasonable.

"The Interstate Commerce Commission in finally authorizing increases in rates of the Eastern lines, has responded to an unmistakable public sentiment, but during a long period of suspension the railroads have been deprived of the revenue of which they should have enjoyed the benefit from the date their tariffs were originally filed to become effective. This emphasizes a serious injustice in the provision of existing law which authorizes the Interstate Commerce Commission, upon its own initiative, to suspend any advanced rates that may be filed by the carriers. This responsibility is met by suspending practically all advanced rates, so that even though the increased rates are justified and eventually approved the carriers are usually deprived of the revenue that should accrue to them during the period of suspension. While the President has hesitated to exercise any influence over the findings of the Commission, it is within his power to send a recommendation to Congress to repeal that provision of the law which empowers the Commission to suspend advanced rates. Under existing practice the railroads are considered guilty of extortion until they prove their innocence and may suffer starvation while awaiting the sustenance to which they are eventually found to be entitled.

"My suggestion affords adequate protection to all interests. First, it relieves the members of the Interstate Commerce Commission of the responsibility of authorizing increases in rates, which they are reluctant to assume, and, by permitting the railroads to assume the initiative in rate making, leaves the Commission unprejudiced in future hearings upon complaints of any of the rates involved. Secondly, the power of the Commission to award reparation will assure the merchants the benefit of the former rates from the date they were advanced whenever the Commission, upon complaint, finds that the increases are unreasonable and orders the former rates restored. Finally, it contemplates a simple measure of justice to the railroads in giving them the immediate benefit of the revenue accruing from advanced rates to which they are entitled, without any prejudice to the interests of the shippers.

DORCHESTER TUNNEL, BOSTON, MASS.

Section E

Bids were received Dec. 15 by the Boston Transit Commission for constructing Section E of the Dorchester Tunnel as follows: (A) Degnon Contracting Co., 30 East 42d St., New York, N. Y.; (B) William J. Shiels, 234 State St., Boston; (C) James J. Coughlan Co., 43 Tremont St., Boston; (D) Rowe Contracting Co., 1607 Commonwealth Ave., Boston; (E) Flinn-O'Rourke Co., Inc., 17 Battery Pl., New York, N. Y.; (F) Coleman Bros., Boston; (G) Hugh Nawn Contracting Co., 82 Savin St., Roxbury; (H) Holbrook, Calbot & Rollins Corporation, 6 Beacon St., Boston; (I) Bruno & Petitti, 18 Tremont St., Boston; (J) McGOVERN & CO., 1 Madison Ave., New York, N. Y. (awarded contract). The item bids were as follows:

	A	B	C	D	E	F	G	H	I	J
105,000 cu.yd. earth excavation (tunnel) shield method	$14.00	$9.50	$10.50	$9.75	$8.75	$9.45	$8.00	$10.25	$8.00	$8.75
7000 cu.yd. earth excavation (tunnel) without shield	14.00	7.50	6.75	7.50	8.75	6.00	8.00	8.75	6.00	8.75
32,000 cu.yd. concrete shield method	14.00	16.00	14.60	14.25	20.50	16.00	16.00	12.70	14.00	15.00
2600 cu.yd. concrete without shield	8.80	10.50	12.00	12.50	20.50	12.00	15.00	13.00	12.00	12.50
50 cu.yd. cinder concrete	6.50	8.00	8.50	10.00	8.00	8.00	10.00	5.00	8.00	10.00
300 cu.yd. mortar	16.00	18.00	15.00	20.00	10.00	16.00	15.00	9.92	15.00	15.00
100 cu.yd. concrete	12.00	17.00	20.00	16.00	10.00	16.00	18.00	10.75	15.00	15.00
200 cu.yd. brick masonry	18.00	20.00	22.00	20.00	15.00	20.00	20.00	19.35	20.00	20.00
200 tons reinforcing rods less than 6 lb. per ft.	16.00	16.00	20.00	25.00	25.00	12.00	10.00	10.00	40.00	30.00
10 tons structural steel more than 6 lb. per ft.	14.00	20.00	10.00	25.00	15.00	20.00	25.00	25.00	30.00	30.00
500 sq.yd. mortar	1.25	1.00	0.60	0.50	0.20	0.60	1.00	1.50	0.50	0.75
1000 cu.yd. grout	19.00	20.00	19.00	18.00	20.00	22.00	18.00	21.70	25.00	17.00
2000 cu.yd. grout, mixture 1 to 1½	11.00	16.00	16.50	16.00	16.00	19.00	18.00	16.70	18.00	15.00
2000 cu.yd. grout, mixture 1 to 2	10.00	13.00	14.00	15.50	12.00	16.00	16.00	15.80	16.00	14.00
100 cu.yd. grout, mixture 1 to 4	8.00	11.00	14.00	14.00	10.00	13.00	12.00	15.24	15.00	12.00
180,000 sq.yd. prepared textile and asphalt	0.75	1.00	0.90	1.25	0.45	0.70	0.70	0.63	1.00	0.60
Other work and risks not covered by other items (lump sum)	25,000.00	10,000.00	5000.00	10,000.00	50,000.00	10,000.00	20,000.00	6000.00	25,000.00	5000.00
5000 sq.ft. hard pine lagging	0.20	0.32	0.45	0.35	0.25	0.30	0.40	0.30	0.50	0.30
4 M. ft. b.m. long leaf yellow pine	65.00	95.00	70.00	80.00	45.00	70.00	100.00	66.70	80.00	55.00
Furnishing and installing compressed air plant (lump sum)	25,000.00	85,000.00	83,000.00	50,000.00	120,000.00	79,000.00	60,000.00	25,000.00	75,000.00	35,000.00
Extended totals	$2,558,490	$2,340,400	$2,277,525	$2,271,500	$2,211,200	$2,180,950	$2,155,750	$2,089,795	$2,077,150	$1,955,375